

THE HOME MEDICAL ENCYCLOPEDIA

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EXAMINER TO THE GENERAL NURSING
COUNCIL OF ENGLAND AND WALES



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INTRODUCTION

THIS book is written for two reasons. Firstly, I have found that ordinary men and women are very often confused by medical terms. A pain in your back doesn't seem much to worry about until you learn to your horror that you have a "sub-acute interstitial myositis", and begin to wonder how soon the undertaker will be calling. Actually, of course, the pain in your back is no more serious whether it be called backache, lumbago or the title above; but medical terms do often give rise to unnecessary alarm. The first purpose of this book, then, is to try to explain the more common medical labels in simple language, so that you may understand what they mean, and I hope cease to be alarmed by many of them.

Secondly, there is the important question of what you can do, as an ordinary layman, about a number of illnesses which may come your way. The answer, of course, is to see your doctor. Make no mistake about this. It takes about six years to train a doctor, and even if this book were twenty times as long it would be impossible to include all the knowledge required to treat the common illnesses; and more often than not, it is very dangerous for the layman to try to do so. But doctors are busy men, and you can help yourself and your doctor considerably by knowing what to do about a number of trivial complaints, what to do in an emergency before the doctor calls, and what to do when you have to nurse a case of illness at home. The main purpose of this book is to answer these questions for you in simple language. I do not intend to deal very

INTRODUCTION

much with "first aid ". Many people have gained an extensive knowledge of the correct treatment of accident cases during the war years, and in any case there are a number of excellent small books dealing with this subject. Nor do I intend to deal with rarities. If your Aunt returns from Africa with some obscure tropical disease your doctor will explain it for you. You will not find it listed here.

What I have attempted to do is to take the common complaints and illnesses which are met with in Britain, to explain them to you, and to advise you briefly about the things *you* can do in your own home to help matters.

HEALTHY LIVING

It is trite, but nevertheless true, to say that prevention is better than cure. It is also true that modern knowledge has taught us how to prevent a large number of diseases, and, that if only this knowledge were generally applied to our ordinary everyday life the health of the community would be improved. Unfortunately, modern conditions are often in conflict with the ideal of healthy living; but even so, much can be done to assist our bodies to remain healthy, and thus give them every chance in any fight against disease.

In many ways the human body can be regarded as an extremely delicate piece of mechanism. To work efficiently it requires a constant supply of fuel, which must be delicately adjusted to the body's needs; it requires regular rest, and it is a prey to many outside influences—attacks by small living organisms, known as germs, excessive heat or cold, violence, unsuitable atmospheres and many other factors. Before discussing the question of disease, to which the bulk of this book is devoted, I shall try to indicate the chief factors in maintaining health. The rules are very simple, so simple in many cases that they seem hardly worth stating, yet time and time again, as a doctor, one sees ill health caused simply by neglect of these rules. Your health is your most precious possession—just how precious is often not realised until it is lost. Guard it jealously.

DIET

Food is the body's fuel, and not only a sufficient quantity but also a correct balance between the various types of food is required to keep the body in health. Broadly speaking, the food we eat can be divided into five different categories, which we must look into briefly in order to have some understanding of what is meant by a well-balanced diet.

(a) Carbohydrates.

These are the starchy foods whose main purpose is to provide energy for the body. Examples in our daily diet are bread, potatoes and sugar.

(b) Fats.

Fat needs little explaining. Most people are familiar with the various forms such as animal fat, butter, margarine and oils. Fats are also a source of energy, and may in addition contain vitamins which are explained later.

(c) Proteins.

These are the body building foods. They are most important during the period of growth; and are also very necessary after growth has ceased, being used in the repair and replacement of the various tissues of the body. Proteins are also required to keep up to scratch the body's defence force against infection, and for the manufacture of substances to deal with invading germs. The chief source of protein is meat.

(d) Inorganic salts.

By this term is meant certain mineral substances which

the body cannot do without. The ordinary table salt (sodium chloride) which we eat with our meals is one example; and there are many others. Calcium and phosphorous are necessary for healthy bones and teeth; the thyroid gland in the neck cannot remain in good working order without a sufficient supply of iodine, and iron is required for the manufacture and replacement of the red corpuscles in the blood.

(e) *Vitamins.*

These important substances are often misunderstood by the layman, being regarded as universal panaceas for all ills or as some kind of "super tonic" which will cure a large number of complaints. In brief the vitamins are complex chemical substances, used by the body for certain important functions, but which are required in only very small amounts. The body is quite unable to carry on without them and if they are lacking serious consequences will result. On the other hand, once the body has sufficient of a particular vitamin it cannot make use of any more. There is thus no point in loading the body with vitamins so long as the basic requirements are present. The vitamins are known by letters of the alphabet and the important ones are as follows:—

Vitamin A. This is concerned in growth, in the body's defence against infection and in proper functioning of the eye. The results of a shortage of this vitamin are, therefore, retarded growth in children, an increased liability to infectious illnesses and a condition of the eye resulting in poor night vision (night blindness). The vitamin is present in butter, eggs and milk, and also in a number of vegetables and fruits—particularly in carrots.

Vitamin B. This is required for a number of important functions within the body—particularly for the healthy working of the brain and nervous system, and of the heart. If the vitamin is lacking diseases known as beri-beri and pellagra may develop in which these organs are disorganised. The actual diseases are not common in this country, but milder shortages of vitamin B may occur. The chief source of this vitamin in the diet is the wheat germ, so that brown bread, cereals and oatmeal are valuable items. It is also present in yeast extracts, and “Marmite” contains a liberal supply.

Vitamin C. This is necessary to keep the blood vessels healthy, and if it is lacking there may be bleeding into the tissues of the body or from the gums, etc., a condition known as “scurvy” which used to attack our sailors in the days of wooden ships. This vitamin occurs in fresh fruits and vegetables, particularly those which go to make up salads, and the condition disappeared in sailors when lemon juice became a regular issue.

Vitamin D. This is necessary for the absorption of calcium into the body, and as we have seen it is required to keep the bones and teeth healthy. If it is lacking “Rickets” may develop, in which the bones become soft and bend. Vitamin D is present in milk and butter, and is also added artificially to margarine. Fish oils, such as cod liver oil, contain vitamin D in a very concentrated form.

HEALTH GIVING FOODS

From what has been said it will be seen that the body's requirements are far from simple. In order to remain

healthy it requires all the substances mentioned previously in adequate quantities. The chief mistake made is to supply too much of the carbohydrate foods, which provide sufficient energy and temporarily satisfy hunger, at the expense of the other important factors. It will be seen that most of the important constituents of the diet are contained in milk, eggs, butter, green vegetables and fresh fruit. The first three being rationed at the time of writing can no longer be obtained "ad lib", but every person should certainly take up his or her full ration. Vegetables and fruit should be eaten regularly, and many of the vegetables also provide coarse material or "roughage" which helps to keep the bowels in good working order. Fish is a valuable source of iodine and other minerals, and a fish meal should be eaten at least once a week. Meat is also strictly rationed, which makes it important that the full amount is used, particularly by growing children.

To summarise the advice given, use your full amount of the rationed foods—and this applies particularly to housewives who often neglect themselves for the benefit of the families and in consequence become ill—vary your diet as much as is possible in these days, and include a good measure of the unrationed fruits and vegetables particularly when they are in season. By obeying these simple rules you will not go far wrong.

SLEEP

Sleep is essential to the body, enabling it to repair the wastages of the day and to replenish its reserves of energy. People vary greatly in their requirements, but a good working minimum is eight hours per day for an adult—children needing considerably longer. Sleeplessness is all too common, but is often due to quite simple causes.

First make sure your bed is comfortable. You will spend about one third of your lifetime in it, and a little extra expense on, say, a good mattress is well repaid. Bedclothes should be warm but not too heavy. The bedroom should be well ventilated without being draughty, and as free from noise as possible. The other important rule is to relax when you go to bed. It is no use taking the worries of the day or an exciting thriller to bed with you and expecting to sleep. Put your worries on one side, make yourself comfortable, and make a conscious effort to relax the whole body. For those who are troubled by sleeplessness, heavy meals and stimulating drinks such as tea or coffee should be avoided at night. Insomnia due to worry can often be cured by getting up, eating a biscuit or smoking a cigarette, and returning to bed in a happier frame of mind.

EXERCISE

Any machine which has been designed for a particular purpose requires regular use to keep it in good working order, and able to carry out its proper function. The human body is exactly similar, but unfortunately in these days more and more people use their bodies less and less. Mechanical transport takes them to work in the morning; they sit hunched over a desk all day; return home in the evening crowded into buses and trains, and then collapse into an armchair with a book until it is time for bed. It is not surprising that under these conditions, their bodies become unhealthy, and a prey to the millions of germs which are waiting to attack. The energy which should be derived from the food they eat is not required; so that instead of being burnt up within the body a considerable

portion of the food is stored up, and the body becomes burdened with increasing quantities of unnecessary fat. The whole body becomes sluggish—the bowels included—so that often a vicious circle is set up. The less the exercise that is taken, the less the inclination to take exercise, and the more flabby and out of condition the body becomes.

Everyone should aim at taking some form of active exercise at least once in the day. The city dweller should allow himself a little extra time on his daily journey, and walk at least part of the distance to and from work. Full advantage should be taken of week-ends and holidays to cultivate an out-of-door hobby such as gardening or golf, or any of the other open air games.

FRESH AIR

This question is closely connected with that of exercise, and the same conditions of modern life which result in too little exercise also tend to limit the use of fresh air. An atmosphere may be unsuitable for the body for a number of different reasons. It may contain impurities which are injurious: the air in towns always contains a considerable amount of smoke, and there are other factors such as petrol fumes which are mildly poisonous. The air may be too humid, which means that it carries too much water vapour which interferes with the normal working of the sweat glands. It may contain too little oxygen: normally the body uses up oxygen from the air and releases another gas called carbon di-oxide. When a large number of people are in a confined space the oxygen tends to become reduced and the carbon di-oxide increases. The other great danger which results from overcrowding and

underventilation is the spread of germs. These are always present in the air; but the numbers are enormously increased where there are many people crowded together, so that there is a great risk of infectious diseases being spread from one person to another. Nearly everyone will know how a "cold", for instance, brought into a crowded office by one person will quickly spread round until nearly all the occupants are affected.

It will be seen by this that fresh air is highly desirable from many points of view. Most of us cannot choose our places of work; but we can at least see that windows are open in the office, and in the trains on which we travel. All the rooms in the home should be thoroughly aired each day, and even on the coldest or windiest day there should be at least a small part of the window open in each room. Bedrooms as well should have a window open throughout the night. It is not necessary to be a fanatic and to sit in a howling draught in order to get the benefit from fresh air. Draughts, in fact, may be harmful and should be avoided. All that is required is that there should be sufficient ventilation to change the air in a room without any undue commotion.

SMOKING

A great deal has been written about the effects of tobacco on the human body, some drawing a most gloomy picture of the evils that will result from its use, and others actually claiming that it is beneficial. The effects of smoking depend largely on the nicotine content of the tobacco, the nicotine being a mild sedative to the nervous system. I do not think there is any doubt whatsoever that smoking is harmful. It coats the lungs with a considerable amount

of tar, reduces ones capacity for heavy exercise; and may, in excess, impair the working of the heart and of the eyes. However, there is little doubt also that smoking in moderation is not *very* harmful. We all know numbers of heavy smokers who live to a ripe old age. For those who are non-smokers I would say do not take it up. It is expensive, mildly injurious and difficult to give up. For those who enjoy their tobacco, the best word of advice is "moderation". It is only when smoking becomes excessive that it is really harmful. Ten cigarettes a day can be enjoyed without any qualms, but if you smoke twenty or more (or the equivalent in pipe tobacco) it is worth considering whether a reduction might not pay dividends in the shape of a keener appetite and better "wind", to mention only two of the benefits. For those who are anxious to give up smoking I may add that I do not know any easy road. It is almost entirely a matter of will power, and no-one can help you with that. The first week without tobacco can be most unpleasant, but I think that to cut down gradually only prolongs the agony. The only real answer is to **stop** smoking, and to resist the temptation to have just one cigarette. Some people find that sucking boiled sweets or chewing gum helps during the early stages. After a while, usually about a couple of weeks, the urge to smoke dies away; and after that it is easy to remain without tobacco provided one is not tempted to have "just a puff" which so often leads to "just another".

DRINKING

The use of alcohol is very widespread in civilised communities, and almost exactly the same remarks apply as

those regarding tobacco. Alcohol is mildly poisonous to the body, and therefore the more that is taken the more injurious it will be. In large quantities over a prolonged period it can cause permanent damage to the brain, and sometimes to the liver. As with tobacco, however, we all know examples which show that moderate drinking even for a great number of years need not shorten life. Beer is a very popular drink in this country, and since it contains very little alcohol is very innocuous. A pint or two of beer daily will harm no one. Wines are a slightly more potent, but pleasant form of alcohol; while spirits such as whisky or gin are relatively highly concentrated and therefore more dangerous. If taken regularly alcohol can be habit forming, and sometimes gets such a grip on the victim that he is almost unable to do without it, and his health becomes ruined. He will probably need skilled treatment to break the habit.

To sum up it may be said that occasional moderate drinking, especially of the more dilute forms of alcohol, does no real harm to the body; but that if drinking becomes a regular and increasing habit then health is bound to suffer in the long run.

THE BOWELS

The chief function of the bowels is to eliminate waste matter from the body. This is mostly derived from the food we eat, and if the waste matter is not eliminated it will accumulate and may gradually poison the whole system. It is important for healthy living that the bowels should work regularly and normally, and it is increasingly common under conditions of civilisation to find that they do not. For those who are troubled in this respect the



article on CONSTIPATION in the later part of this book should be consulted.

GENERAL CONSIDERATIONS

A number of the most important items in healthy living have been considered, but it must be obvious that these are not all. The body is very largely under the control of the mind, and if this is not in a settled state, the workings of the body will soon be upset, and ill health will result. It is useless to advise people not to worry. We all have our worries and, indeed, life is largely made up of them. The danger lies not in considering our problems but in letting them get the upper hand of us. Don't let your troubles prey on your mind to the extent that you take them to bed with you, re-examine them each morning and finally get into a state where life seems to hold no enjoyment. Keep them under control, and you will find that even the most serious problems usually develop unsuspected turns for the better as time goes on.

Another important consideration is one's mental attitude towards health itself. I have known a number of people who have kept motor cars, and at the first sign of an unusual noise have taken them to a garage for expert advice. They have spent varying sums of money having the trouble put right before it became serious. Yet if a motor car breaks down another can always be purchased, and a man may own a dozen or more cars in his lifetime. I have had these same people come to me as a doctor; but not at the first sign of something wrong, but sometimes after many weeks or months, when what might have been easily cured in the first place has progressed to something really serious. A man has only one body to last him all

his days, and if it is neglected until past mending then no amount of money will replace it; and even if he has fifty cars in first class order they will be no use to him. The moral, I think, is obvious. If you want to remain healthy, do not neglect nature's warnings. Take your body to a doctor for expert advice as readily as you would take your car to a garage.

It is, of course, equally foolish to go to the opposite extreme and to imagine that every little ache and pain is a sign of some major disorder. The body, as has been said, is a very delicate piece of mechanism, and is easily upset. We all suffer from temporary upsets of one kind and another, and these are not of any great importance, and soon pass. The conditions for which advice should be sought are too numerous for me to detail, but in general any departure from the normal which *persists*, or which *recurs regularly*, should be considered as a warning sign. Thus an occasional headache attacks nearly all of us from time to time, but is without any special significance. If, however, you were to wake up with a bad headache *every* morning for a week or ten days without any apparent cause you would be foolish not to consult your doctor to find out why.

Healthy living is not really very difficult. Beware of cranks and fads, use a liberal dose of common sense in your daily life, exercise moderation—even in keeping to the rules, for nothing is more deadly than boredom, and when in doubt consult an expert—your doctor.

A

Abortion.

Strictly speaking this term is used when a pregnancy comes to an end before the 28th week. After that the condition is known as a miscarriage. Among lay people, however, the term "miscarriage" is generally used irrespective of the duration of the pregnancy, and the term "abortion" often carries with it the idea of a "criminal abortion" or "illegal operation".

A few women show a little loss of blood at the time when the first period should be due even though they are pregnant. Apart from this there should be no loss or discharge during pregnancy, and if there is any loss it means that something is wrong and that an abortion or miscarriage is threatened. When this occurs prompt action is needed if the baby is to be saved.

The usual story is that during her pregnancy, perhaps after an illness, perhaps after some heavy exertion, or perhaps for no apparent reason the patient begins to lose a little blood. She may also have some low backache, and complain of feeling generally unwell. She should be put to bed immediately, given a hot water bottle, and the doctor asked to call as soon as possible. She should not get out of bed for any reason until the doctor has seen her. For those women who wear an internal pad such as "Tampax" during their periods, this is best avoided, as the insertion of anything into the female passage carries with it the danger of infection. An ordinary external "sanitary towel" is far better at this time. Your doctor will advise you what else needs to be done. He may decide to keep the patient in bed at home until the danger

has passed, or he may decide, especially if there has been much loss, that the patient is better in hospital.

Operations to end pregnancy are, of course, illegal, except in very special circumstances (e.g. severe heart disease) when the mother's life is in danger. Apart from these rare circumstances no doctor will end a pregnancy, but unfortunately numbers of misguided women seek help from unqualified persons. Illegal operations always carry with them considerable danger for the mother, especially as they are rarely performed under proper conditions. Various drugs are also taken by mouth for the purpose of ending an unwanted pregnancy, but these rarely achieve anything apart from making the mother ill. Regrettable as pregnancy may be at times, especially for the unmarried mother, it is better to let it continue than to risk chronic ill health or even death at the hands of some unqualified person whose only aim is to make easy money out of the misfortunes of others.

Abrasion.

An abrasion is an injury to the outer part of the skin which exposes the deeper layers. It is often known as a graze. These injuries are common, especially in children, and are not serious. The chief danger from an abrasion is that of infection. Minute living organisms or germs may get into the tissues, where they cause inflammation and the formation of pus or "matter"—a condition often known as "festering". Abrasions should be washed clean with water which has boiled and been allowed to cool, and to which some antiseptic (to kill the germs) has been added. "Dettol" is a very useful household antiseptic as it is very effective, and does not damage the delicate tissues. The abrasion should be washed thoroughly with one

tablespoonful of "Dettol" in a tumbler full of water, then covered with clean dry gauze and either bandaged or strapped with sticking plaster. The abrasion should be kept covered until it is dry and firmly healed.

Abscess.

An abscess is a collection of pus or "matter" in some part of the body. Pus can be likened to the debris which litters a battlefield. When germs enter the body there is a fight between them and the body's defences, and pus is usually formed. It contains dead germs, dead blood cells and fluid which has been poured out into the affected area.

Most abscesses are near the surface and are due to germs invading the skin. These abscesses are usually called boils or carbuncles. Sometimes abscesses form internally following various diseases. For instance an abscess may form in the lung after pneumonia. These, however, are serious matters outside the scope of this book. For the treatment of boils and carbuncles look under the appropriate headings.

Acidosis.

This term has a very precise medical meaning, and is applied to conditions in which the amount of acid in the body, and particularly in the blood is increased. Often, however, it is used in a much wider sense by lay people and intended to cover conditions such as an upset stomach, or vomiting attacks in children. In this sense the condition is often due to excessive eating or drinking, and is best remedied by giving the stomach a rest. A teaspoonful of bicarbonate of soda in a glass of cold water on rising,

and light meals for the rest of the day will usually put matters right.

Acne.

This is a common condition in which the face, and sometimes the upper part of the trunk, is covered with spots. It is caused by blockage and infection of some of the sweat glands. It is seen most commonly in young people of both sexes at the time of puberty—that is at the time when their sexual functions are developing—and it is at least partly due to glandular changes within the body. Treatment is not easy, but cleanliness—frequent washing with soap and hot water—helps to reduce the number of spots. Your doctor may be able to prescribe a lotion which will also help, and for very severe cases there are other measures, such as X-ray treatment, which are sometimes useful.

In the great majority of cases the condition improves and finally clears up as full adult life is reached.

Acute.

Sudden and short lived. Thus your doctor may speak of an *acute* appendicitis, which “blows up” suddenly and requires immediate treatment. The opposite is chronic which means long drawn out. A chronic appendicitis may go on for months with nothing but occasional attacks of pain in the lower part of the stomach before treatment is finally decided upon. Sometimes the term “sub-acute” is used to describe conditions midway between the acute and chronic.

Adenoids.

These are little masses of tissue which grow at the back

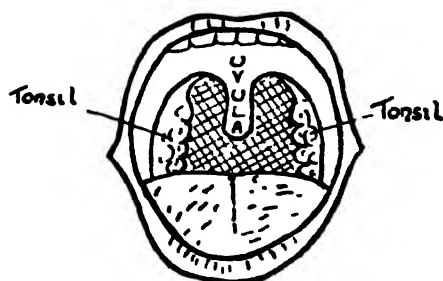
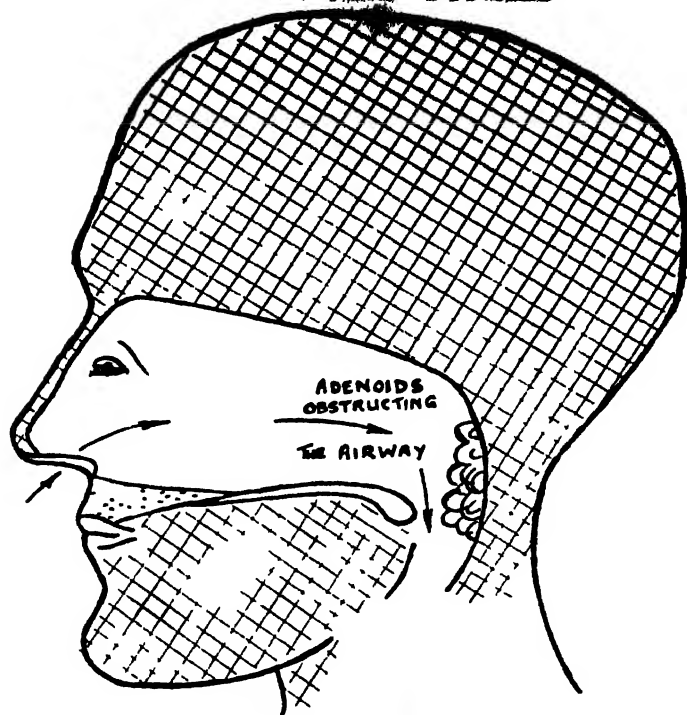


Figure 1.

of the nose. They are normally part of the body's defence against germs entering through the nose, and they are very closely connected with the tonsils which help to guard against germs entering through the mouth. Sometimes, in children, the adenoids grow so large as to obstruct the breathing through the nose. When this happens the child speaks with a nasal voice, becomes a mouth breather, and in consequence may develop a pinched and deformed appearance of the face and upper jaw. It is then necessary to remove the adenoids by operation so that normal breathing through the nose can be restored; and as the tonsils are also often enlarged in these cases they are usually removed at the same time.

Adrenal Glands.

These are two small glands which are situated above each kidney. They manufacture various substances which are poured into the blood stream and help to regulate the inner workings of the body. One of these substances, known as *adrenaline*, increases the heart rate and enables the body to act more quickly than usual in an emergency. Disease of the adrenal glands causes a wasting disease known as *Addison's disease*. Sufferers can be helped considerably by glandular treatment, in which the missing substances, which ought to be manufactured by the adrenals, are supplied artificially.

Alcoholism.

Alcoholic drinks have been consumed by men for centuries past. Modern scientific research has disproved that alcohol is in anyway a stimulant to the brain. Actually it damps down the higher functions of the brain so that we are less self-conscious, less aware of our shortcomings

and generally develop a spirit of goodwill towards others. Taken in moderation it is a help towards relaxation in these days of high pressure civilisation. Taken in excess it may prove habit-forming so that the person becomes unable to do without it. For drunkenness the best remedy is to sleep it off. There should be nothing tight round the neck, and the victim should be well covered as the body rapidly becomes chilled under the influence of alcohol. Certain varieties of cheap alcohol are extremely dangerous as they contain "wood alcohol" which can cause blindness and death. Methylated spirit also contains "wood alcohol".

Allergy.

This is a condition of abnormal sensitivity of the body to certain outside influences. The sensitivity is usually inherited, so that a similar condition may be found in parents and other members of the family. The outside factor is usually a protein—that is a substance of animal or vegetable origin. Thus, for instance, a normal person is not troubled by grass pollen, but certain people are sensitive to pollen which irritates the nose and eyes. This is the condition of "hay fever" and the victim is said to be *allergic* to pollen. Other people develop a constriction or narrowing of the air passages when exposed to certain dusts, etc., to which they are sensitive. This causes difficult and wheezy breathing—the condition known as asthma.

Alopecia.

The medical term for loss of hair or baldness. Ordinary baldness is almost entirely confined to the male sex, and often runs in families. There is no effective treatment for the condition in the sense that the lost hair can be made to

grow again, and so called hair tonics are quite useless for that purpose. However, treatment in the early stages of the condition may delay its advance. The hair should be washed at least once, and preferably twice a week with hot water and a good shampoo. Particular care must be taken to rinse all the soap out of the hair after washing. On the day following the shampoo the hair should be left alone, but on other days of the week five to ten minutes massage to the scalp should be carried out night and morning. This is done with the finger tips in a circular movement so that the scalp is massaged against the bones of the head. This serves to keep the scalp free and to stimulate the blood supply to the roots of the hair. Tight hats should be avoided by anyone having a tendency to baldness.

There is another type of baldness which affects both men and women, in which the hair falls out in patches (alopecia areata). This may follow a serious illness, or sometimes a mental shock or a period of great worry. The bald patches are often a cause of annoyance to the sufferer, particularly in women, but unfortunately there is no effective treatment for the condition. However, in this type of baldness the lost hair *does* grow again, and although this may take many months the sufferer's patience will eventually be rewarded.

A great deal of money can be wasted on so-called treatments for baldness. In the ordinary type of baldness, in men, nothing in the writer's experience has ever made lost hair grow again, while in alopecia areata the hair will grow, but only in its own time and cannot be hurried.

Amenorrhoea.

Cessation of normal menstruation—the monthly

“ period ” in women. The periods normally stop sometime between the ages of 40 and 50 at the time of the menopause, when women become no longer capable of childbearing. By far the most common cause of amenorrhoea before this is pregnancy, when, of course, the periods stop only during the time the woman is carrying. Many general illnesses in women, especially prolonged and debilitating illnesses, are associated with absence of the periods, and sometimes a period is missed in a perfectly normal and healthy woman for no apparent reason. Worry can also cause a period to be missed, and an unmarried woman may be so worried by the possibility of a pregnancy as to cause her to miss her period and thus (so she thinks) confirm her worst fears. In the absence of any other symptoms one missed period should not be a cause for undue alarm, but if a second is missed you should certainly consult your doctor for advice.

Amnesia.

Loss of memory,. The memory may be lost in two different sets of circumstances. The first follows actual injury to the brain, such as a severe blow or a fracture of the skull, and the loss of memory is usually for the period immediately before the accident. In other cases loss of memory may be a symptom of mental illness, perhaps associated with a time of severe stress and worry. The condition calls for expert treatment, but those associated with a case of amnesia should not be too alarmed for the memory is practically always fully recovered. In other instances patients may *pretend* to have lost their memories.

Anaemia (see also PERNICIOUS ANAEMIA).

The normal average human body contains about eight

pints of blood, which is pumped round by the heart and nourishes the tissues of the body. A large part of the blood is composed of small particles which are red in colour and are called the red blood corpuscles. These red corpuscles carry oxygen which is taken into the lungs from the outside air to all the tissues of the body, and this oxygen is necessary to keep the tissues alive. Anaemia is a condition in which the number of red cells (or corpuscles) is reduced below the normal, and in this condition the body is not able to work as efficiently as it should. The patient is usually noticeably pale in colour since the amount of red matter in the blood is reduced. Anaemic patients are very easily tired, may find themselves short of breath, and not uncommonly suffer from headaches. Women suffer more from anaemia than men since their normal monthly "period" causes a drain on their red cells. There are many different causes of anaemia, but the most common is shortage of iron in the diet, since iron is required for the manufacture in the body of the red cells. Sometimes the cause is a lack of other substances in the body, which may have to be replaced by injections, usually of liver extract.

Anaesthesia.

The abolition of pain during operations, usually by putting the patient to sleep. The substance used is called an *anaesthetic* and chloroform and ether are probably the best known. They work by damping down the action of the brain until consciousness is lost, and the patient becomes relaxed. Under these conditions operations can be performed painlessly and easily. More modern anaesthetics can be injected into the blood stream when sleep is produced very quickly and pleasantly. Sometimes the patient

is not made unconscious, but injections are made into the nerves of the part to be operated on so that no pain can be felt. An example of this is the "spinal anaesthetic" where the injection is made into the spinal cord rendering the whole of the lower half of the body numb. Under modern conditions no one need feel the least fear that any pain will be felt during an operation.

Aneurysm.

An aneurysm is a weakness in the wall of a blood vessel which causes it to bulge. It is a condition which may develop in older people in the large blood vessel (the aorta) which leaves the heart.

Angina.

This is the name given to a form of heart disease in which the blood supply to the heart itself becomes inadequate. As the body grows older the blood vessels become harder, and their walls thicken so that they are able to carry less blood. The heart itself is a special kind of muscle which pumps the blood, and if the small vessels which nourish the heart muscle are affected in this way the heart cannot work as efficiently as it should. When the sufferer attempts to do something which is too much for the heart (for example walking up a hill) a severe pain develops in the centre of the chest, which passes off after a short rest. Sufferers from angina usually get to know exactly how much they are able to do before the pain develops, and they must not try to do more than this on any account. Medical advice should certainly be sought for this trouble as there are various medicines which can improve the condition, and drugs can be taken to relieve the pain when it occurs.

Ankylosis.

The medical term for fixation of a joint. This may occur as the result of serious injury or disease of a joint (e.g. tuberculosis). It also occurs in some cases of advanced arthritis. (See ARTHRITIS).

Antrum.

The antrum is a hollow space in the cheekbone which communicates through a small opening with the nose. There are a number of hollow spaces in the bones of the face and skull, and they serve to reduce the weight of the head. The most important are the two antra, one in either cheek, and the two sinuses which are hollow spaces in the bone beneath the eyebrows. Unfortunately, especially after a cold, germs may get into these spaces and set up an infection, and cause the formation of pus (see ABSCESS). This results in a chronic discharge from the nose, and pain in the area affected. The condition is commonly known as *sinusitis*. If the antrum is affected there is pain and tenderness in the cheek. If a frontal sinus (behind the eyebrow) is affected there is pain in that region, and often a headache on rising in the morning which wears off during the day, since the pus is able to drain away from the sinus when the head is upright. In this condition the nose must be kept clear to allow the sinus or antrum to drain. A "Benzedrine" inhaler is useful, and so are inhalations of "Friar's Balsam", one teaspoonful to a pint of boiling water. If the condition does not clear up quickly your doctor should be consulted, since it may be necessary to wash out the sinus with a special instrument before the condition is cured.

Apoplexy.

This is not an accepted medical term, but is often used by laymen to describe a stroke or seizure. See the article on STROKE.

Appendicitis.

This is a very common disease of civilised communities. The food we eat passes from the stomach through a long tube, (the intestines) which lies coiled up inside the abdomen (or belly). At one point in this tube there is a small side branch called the *appendix*, a few inches long, which comes to a blind end. (See FIG. 2.) This was once very much larger and had an important part to play in digestion, but now it is only a rudiment and serves no useful purpose.

Appendicitis means inflammation of the appendix (all medical terms ending in “-itis” mean inflammation, e.g. sinusitis, cystitis, myositis, etc.). Partly digested food may enter the appendix and as there are always germs present in the intestines, irritation and infection of the appendix may result. This may cause swelling of the opening of the appendix, in the same way as the skin round a boil will swell, so that the infected matter is unable to get out of the blind tube. Appendicitis has then developed, and if allowed to continue the appendix may burst and spread the infection over the whole of the inside of the abdomen—a very serious condition.

Appendicitis usually starts with an aching pain in the centre of the abdomen around the umbilicus (or navel), and there may be some sickness or a little diarrhoea (looseness of the bowels). There is usually some fever, so that the temperature is raised; and after a little while the pain moves down to the right side, above the groin where the

THE CONTENTS OF THE ABDOMINAL CAVITY

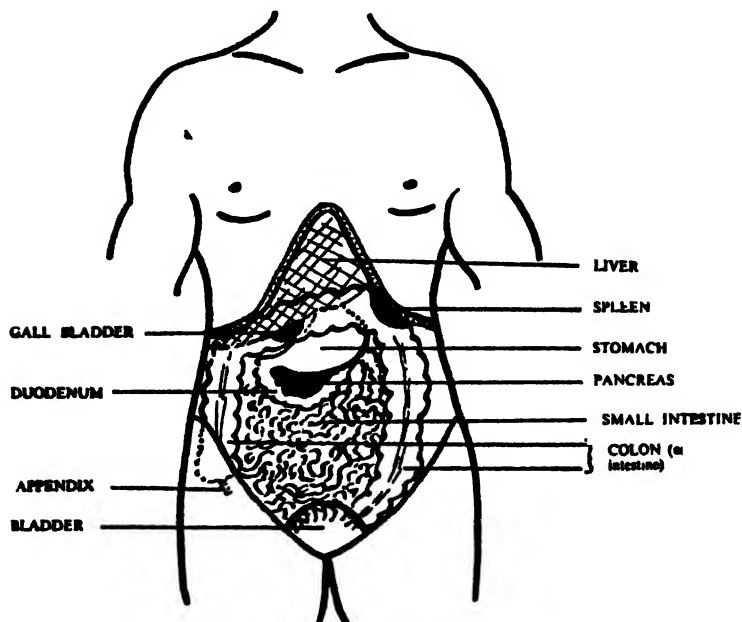


Figure 2.

appendix is situated, and becomes more severe. Under these circumstances the patient should be put to bed and a doctor called without delay, since the only effective treatment is to remove the appendix by operation. This must be done as soon as possible, before there is danger of the appendix bursting and spreading the infection. There is one rule that everyone should remember. *In a case of stomach ache it is most unwise to give an aperient without a doctor's instruction.* If the condition should be appendicitis the violent action of the bowels caused by the aperient may cause the appendix to burst, with fatal results. This is

especially important in children. **NEVER GIVE A CHILD WITH "TUMMY ACHE" AN APERIENT WITHOUT CONSULTING A DOCTOR.**

Arteries.

These are the thick walled blood vessels which carry blood away from the heart. After the blood has been distributed to the tissues of the body it is collected in thin walled blood vessels, *the veins*, which return it to the heart. See also the article on **HEART DISEASE**.

Arthritis.

Arthritis is the medical term for inflammation of the joints. It is a common condition in middle-aged and older people of both sexes. There are many different varieties of the condition. Sometimes one or more joints are affected during the course of some other illness—an acute arthritis (*see* ACUTE) which soon settles down. In children the condition of **RHEUMATIC FEVER** is associated with inflammation of the joints. The more usual types of arthritis, however, affect older people and develop very slowly, lasting for many years. The cause of these chronic types of arthritis is not known, and treatment is very difficult. However, sufferers can usually be helped very considerably by "physiotherapy"—massage, exercises, electrical treatment, etc.—and there are also other methods, such as injections of gold preparations, which often help. In certain cases X-ray treatment may be used, and in others an operation may help to free a joint which has become fixed. For the consolation of sufferers, a great deal of time and money is being spent on extensive research into the cause and treatment of this crippling condition. For

those afflicted with the chronic type of arthritis it is usually best to keep as active as possible since if an arthritic joint is not used it may rapidly stiffen up and become almost fixed. Treatment may have to be carried out for a long time, and must be persevered with.

Artificial Insemination.

It is sometimes a tragedy in married couples who very much desire children that they are unable to have a child owing to some defect on the part of the husband. Under these conditions a child is very often adopted. Sometimes, however, the wife is most anxious to bear a child of her own and under these conditions the use of artificial insemination has occasionally been employed in recent years. It consists of collecting the semen (or male seed) from an anonymous donor and placing it within the female passage so that fertilisation and pregnancy can occur. The child of course is not the child of the husband. The use of artificial insemination is a very debatable point, being condemned by many, particularly the church. There are many legal points concerning inheritance, etc., which are not yet settled. It is only indicated in very exceptional cases, and no doctor will undertake it without the very definite consent of the husband concerned.

Asphyxia (*see also* ARTIFICIAL RESPIRATION).

This is the condition of suffocation in which the body is deprived of air, or more specifically of oxygen (*see under* ANAEMIA). Asphyxia may be brought about in several ways. The air passages may be blocked as in strangulation when the windpipe is compressed by the hands, or in young children who sometimes get food or

other objects stuck in the back of the gullet. It may be produced by breathing gases which lack oxygen, as for instance when someone puts his head in the gas oven to commit suicide. It may be produced after an electric shock, when the muscles which move the chest and draw air into the lungs become paralysed, or it may be produced in drowning when water is taken into the lungs instead of air. Whatever the cause, normal breathing must be started as soon as possible.

If a young child chokes and goes blue in the face with something stuck in the throat it should be picked up by the legs, held upside down, and thumped vigorously on the back to dislodge the block. Medical aid should be summoned urgently, and if the above does not free the air passage, a finger should be pushed as far down the throat as possible in an attempt to free the obstruction.

In gas poisoning, electric shock, or drowning, if breathing does not start of itself immediately, artificial respiration must be given without delay and continued until medical aid arrives. For details see below and FIG. 3, page 40. In gas poisoning it is necessary to carry the victim well away from the gas-filled atmosphere.

Artificial Respiration.

1. Place the victim on a firm surface, face downwards. Remove anything tight round the neck. Turn the head to one side and insert a finger into the mouth, pulling the tongue well forward so that it does not obstruct the airway.

2. Kneel down astride the victim. With the arms straight place the hands one on either side of the lower part of the back of the chest, below the shoulder blades. Spread the fingers wide to cover as large an area as possible.

3. Lean the weight forwards, keeping the arms straight and pressing with the hands downwards towards the ground and forwards towards the victims head. Do not move the hands from their position. This will drive the air from the lungs.

4. As soon as the chest has been emptied of air, lean back, keeping the hands in position but taking all the weight off them. This will allow the chest to expand and air to enter the lungs.

5. After a pause of about 4 seconds lean the weight forwards again. The whole manoeuvre should be repeated about 12 to 16 times a minute until the victim begins to breathe again or until medical aid arrives.

ARTIFICIAL RESPIRATION

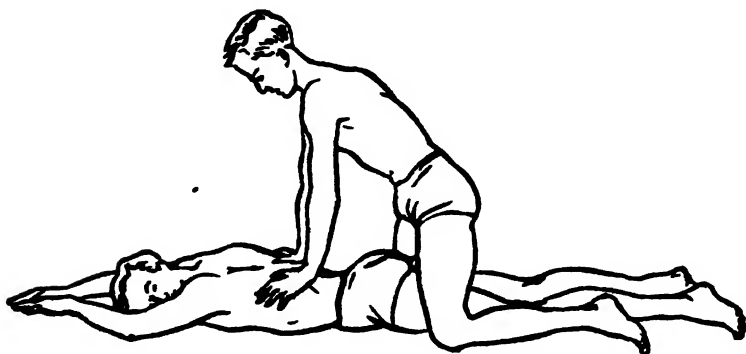


Figure 3.

Asthma.

Asthma is usually a hereditary condition in which abnormal sensitivity to outside influences causes a periodic

constriction of the breathing tubes with wheezy and difficult breathing (*see* ALLERGY). The condition is not uncommon in young babies, especially following a cold or bronchitis, but these children who start at a tender age often grow out of it, and are quite normal in later life. In other cases the condition starts at the time of puberty (*see under* ACNE) and in this case may persist into adult life. A great deal can be done to help sufferers. Injections of various substances can be made into the skin to find out what substance it is that causes the attack, and if this is avoided attacks may cease or be very much reduced. Many different substances cause attacks in different people. I recall one case who was practically cured when his wife changed her brand of face powder: in others, feathers, dust, etc., etc., are found to be responsible. Injections of adrenaline and other drugs can be given by a doctor to relieve the attack, and often a course of breathing exercises to expand the chest will help the sufferer considerably.

B

Backache.

This is a common complaint, and is usually due to a type of muscular rheumatism, or may follow an unaccustomed strain such as digging. A hot bath followed by a rub over the affected part with liniment will often clear the condition up. In women a chronic low backache is sometimes due to disease or displacement of the uterus (womb), and in both sexes backache is occasionally a symptom of some internal disorder. If a backache persists for more than a week or so, a doctor should be consulted, but the great majority of backaches are not serious and will disappear with simple treatment.

Balanitis.

An inflammation of the foreskin in the male. This occurs both in children and adults, and is usually due to lack of cleanliness. All males (and mothers of male children) should wash beneath the foreskin when bathing, as otherwise debris accumulates and eventually leads to inflammation.

Biliousness.

A term sometimes used to describe a temporary digestive upset. It has no precise medical meaning, and the reader should consult the articles on ACIDITY and DYSPEPSIA.

Birth (*see also* LABOUR).

Normally the human baby is expelled from the mother's body at about the end of the 40th week of pregnancy. The uterus (or womb) begins to contract at regular intervals

causing the "pains", and the female passage (vagina) dilates until eventually the baby is driven out into the world. It sometimes happens that a birth occurs in some out-of-the-way place or starts early and unexpectedly before medical aid can be summoned. Under these circumstances a lay person may have to render assistance to the mother. She should be put to bed once the pains become strong and occur at short intervals. The bed linen should be freshly laundered, and the room kept warm. The mother may lie on her side or back, and unless a doctor is expected soon (when she may be restrained) she should be encouraged to bear down (by contracting the tummy muscles) with each pain. When the baby's head appears it should be restrained for a little by pressure from the well-washed hand of the person helping. This is to prevent a sudden stretching of the external parts which may otherwise be torn. After the head is born the rest of the body follows quickly and easily. The baby will still be attached to the mother by the umbilical cord, and this should be tied in two places with clean thread some inches away from the baby. It should then be cut with clean (preferably boiled) scissors between the threads, which will prevent any bleeding from the cord. The baby may be smacked once or twice if it does not breathe or cry, and should then be wrapped in warm clothing and left in peace. The mother should be covered in warm bedclothes, and she will probably produce the "afterbirth" in a short while. This should be saved for the doctor's inspection so that he may see if it is complete. If there is considerable bleeding after baby is born the foot of the bed should be raised (e.g. on a chair) so that the mother's head is lower than her buttocks. She should be kept especially warm, and given drinks if she asks for them. It goes with-

out saying that no unqualified person should attempt to conduct a birth unless there is absolutely no alternative, and every effort must be made to secure the services of a doctor or nurse at the earliest possible moment.

Blackheads.

These are small black spots in the skin due to a collection of debris in the openings of the sweat glands. The reader should consult the article on ACNE. The general treatment for ACNE and blackheads is the same, and the two conditions are very commonly found together. An individual blackhead can sometimes be removed by soaking well in hot water and then pressing with the end of a round key which has a hole in the end (e.g. a watch key). Firm pressure with the end of the key around the blackhead will often cause it to pop out into the end of the key.

Bleeding (*see* HAEMORRHAGE AND BIRTH).

Blood Pressure.

The heart is a specially adapted muscle which pumps the blood through blood vessels around the body. This pumping action naturally results in the blood being under pressure, and since the blood vessels become hardened with age, and have less "give" in them, the blood pressure tends to rise with increasing years. In certain conditions (arteriosclerosis) the arteries become abnormally hard, and the blood pressure may rise to dangerous levels. The chief dangers are that the heart may be unable to cope with the great strain put upon it, or that a blood vessel may burst in some important organ such as the brain (*see* STROKE). It should be realised that even in normal persons the blood pressure varies considerably, and that there is a wide margin of increased pressure which the heart and vessels can deal with without any great danger. On the whole,

lay people tend to be needlessly frightened by the mention of "blood pressure", and they should realise that those with a moderate rise in the normal pressure may live for many years. I have known quite a number of sufferers from "blood pressure" who have lived to a ripe old age, and finally died from something quite unconnected with this complaint. Be advised by your doctor. He will probably prescribe moderation in diet and in exercise, but there is no reason why the patient with blood pressure should not lead an enjoyable and useful life within these limitations.

Blood Transfusion.

The technique of transferring blood from a healthy donor to a sick patient has saved many thousands of lives. Operations which would have been thought impossible in the past can now be performed with relative safety, and accident cases in peace-time and casualties in war may be given a far better chance of recovery. Other examples of the usefulness of blood transfusion are the treatment of severe bleeding from any cause—perhaps after childbirth or from a stomach ulcer—and the treatment of some kinds of anaemia and other blood diseases. Human blood can be divided into four major groups, and in transfusion work it is necessary to use blood of the correct group if ill effects are not to follow. "Blood banks" are now kept all over the country where blood of different groups is stored so that it is readily available in case of emergency. It must be realised that blood for transfusion can only be obtained from human volunteers, and that if there are not enough volunteers there cannot be enough blood for all purposes. The giving of blood for transfusion purposes is perfectly safe, and a very simple procedure. Everyone who can

should volunteer. It may be that one day your own life, or perhaps your child's, will depend upon a prompt transfusion.

Boils.

Boils are small abscesses (*see* ABSCESS) which develop in the skin due to infection by germs. These usually enter through the small openings of the sweat glands. Boils are not serious, but are painful and troublesome. The best home remedy is still the hot fomentation or poultice. Several layers of lint, or lint smeared with "kaolin" are applied as hot as is bearable every few hours; the heat serves to bring the boil "to a head" and to promote the discharge of the matter it contains. If a boil does not clear up quickly, or if boils appear in crops, your doctor should be consulted. If the condition becomes serious, modern methods of treatment such as penicillin will quickly put matters right.

Breast.

The female breast is a gland which is normally inactive, but immediately after birth it begins to function and produce milk for the nourishment of the young baby. Sometimes considerable perseverance is called for before breast feeding is properly established, but a mother should always make every effort to breast feed her baby. The breast milk is by far the best food for the infant, and contains valuable substances for warding off infection which cannot be replaced by artificial feeding. Sometimes infection enters the breast, which becomes painful and inflamed in early days of feeding, and a breast abscess (*see* ABSCESS) may develop. Hot poultices (*see* BOILS) may be applied as an emergency measure but a doctor should always be

consulted as the matter may become serious, and may interfere considerably with the feeding of the baby.

Any lump in the breast at any age should always call for advice from a doctor. Many lumps are not serious, but some lead to serious consequence if neglected.

Bronchiectasis. (*see next item*).

A chronic infection of the lung due to weakness and distortion of the smaller breathing tubes or bronchi. It can sometimes be helped by an operation to remove the affected part of the lung.

Bronchitis.

This is a very common complaint, especially during the winter months, and usually follows a "cold". The germs spread down from the nose and affect the breathing tubes, or bronchi, causing them to be inflamed. There is often some pain in the chest, a raised temperature, cough, and the production of sputum. The patient is best kept in bed in a warm atmosphere, and a cough mixture is usually prescribed to hasten recovery. It is most unwise to remain up and about with bronchitis since there is always a danger that pneumonia may develop. Children need careful handling with this complaint for the same reason.

Broncho-pneumonia.

A type of pneumonia in which the infection spreads from the breathing tubes, or bronchi, into the lung substance. (*See PNEUMONIA.*)

Bruises.

A bruise is caused by violence which does not break the skin, but which causes injury to the tissue beneath. The

blue colour, which changes to green and yellow and gradually fades, is due to bleeding into the damaged tissues. There is no real treatment for a bruise except time, which will result in a slow return to normal. During the early and painful period a cold compress—lint wrung out in ice-cold water—will help to relieve the discomfort. A black eye is one variety of bruise. The proverbial beef-steak apart from being almost unobtainable today is not of any real value, so that you are not likely to be able to persuade your doctor to give you a certificate for one.

Bunion (*see* BURSA).

Burns.

A burn is an injury caused by the application of sufficient heat to some part of the body to damage or kill the tissues. The heat may be in the form of a flame, or hot object, or sometimes in the form of steam or boiling water when the condition is usually called a *scald*. There is no great practical difference between a burn and a scald. Burns vary very much in severity. In mild cases there may be nothing more than a little reddening of the skin, while in severe cases a whole limb or more may be destroyed. There are two chief dangers from burns. The first is a condition of *shock*, which is a severe form of collapse which follows serious and painful injuries, and the other danger is that of infection. When the tissues are killed or injured they are unable to defend themselves against invasion by germs, so that burns very easily become infected and “fester”. For minor burns and scalds in the home the best treatment is as follows: If the burnt area is dirty, it should be wiped clean by gentle swabbing with an antiseptic (*see* ABRASION) and following this should be covered with clean gauze,

and kept covered until it is dry and healed. For more serious burns the first step is to lessen the degree of shock. The victim should be put to bed while medical help is summoned, kept warm and given a warm drink. For the burn itself it is probably best to do nothing except to wrap the part in a freshly-laundered towel or handkerchief. If the accident happens somewhere where medical help may be delayed, a compress made by dipping clean lint or gauze into cooled boiled water containing sodium bicarbonate (one teaspoonful to a tumbler of water) will often lessen the pain. For severe burns medical help should always be summoned urgently, and for minor burns which do not heal and which fester it is always wisest to consult a doctor, since the infection may spread and become serious.

Tannic acid jelly is sometimes recommended, but I do not advise the use of this in the home. In certain parts of the body it may be definitely dangerous since the jelly eventually sets into a hard crust which may interfere with the circulation, especially in the hands where burns are common. Do not smear burns with oil or butter as I have seen done on more than one occasion. It makes proper treatment a great deal more difficult, since the grease, which often contains germs, has to be removed (sometimes painfully) before anything else can be done.

Bursa.

A bursa is a small sac containing fluid which serves to protect some part of the body from injury. A bursa is usually found over some prominent bone which it cushions. If a bursa becomes inflamed the condition is known as *bursitis*, and this most commonly occurs in the feet and knees. In the feet there is a small bursa at the base of each of the big toes on the inner side of the foot. This not

uncommonly becomes inflamed through wearing shoes which are too tight. The condition is often known as a *bunion*. If the bunion is protected from pressure by wearing loose shoes or slippers it will often subside. A small pad round the bunion is also a help.

In the knee there is a bursa over the knee-cap which may become inflamed if much kneeling is done—the condition of “housemaid’s knee”. This again will subside with rest, and it may be necessary to avoid kneeling for some time.

C

Caesarian Section.

This is the operation by which a living child is taken from the mother's womb. The name is derived from Roman times when the operation was performed on the dead mother in order to save her baby. Caesarian section is not a particularly difficult operation, and can be extremely useful in cases in which natural birth might prove difficult—for instance, if the mother's "passage" is in any way deformed or unduly narrow. The operation has no serious after effects, and in fact many patients who have experienced both consider it less unpleasant than normal labour. A Caesarian section, these days, is no bar to having subsequent children, and number of women have been able to raise families when this would have been impossible without the aid of the operation.

Calculus.

This is the medical term for "stone". Stones may form in various internal organs such as the gall bladder, the kidneys or the urinary bladder, and may cause attacks of pain and other disturbances. Once a stone has formed it is not possible to disperse it, and if causing trouble, removal by an operation is generally necessary.

Cancer.

This condition is unfortunately all too common, and is the third most frequent cause of death at the present time. The term "cancer" covers a group of allied disorders which have in common the unrestrained growth of some

small part of the body with the formation of a lump or tumour. Normally the growth of any particular part of the body is very carefully regulated to meet with its requirements. When some part is injured the cells (minute living structures) of which it is composed multiply until the injury is made good, but the whole process is most carefully controlled. In the condition of cancer, for some reason which we do not know, a group of cells starts to multiply rapidly and abnormally and continues to do so, disorganising the normal working of the body. Sometimes small groups of these cells may be carried to distant parts of the body by the blood stream and there set up fresh tumours. If the process continues unchecked some vital organ will eventually become so disorganised that life cannot continue. It is most important that *the lay person should not take the all too common view that cancer is incurable. In a large number of cases it is curable if taken early enough*—and that is the important point. The most effective treatment, in numerous instances, is still surgery, and that means cutting out the affected part by an operation. If all the cancer cells are removed the condition will be cured, and it is obvious that the smaller the tumour, the less chance it has had to spread, and the more likely it is that a complete cure will follow the operation. There are also other valuable means of treating the condition, such as X-ray or radium treatment.

A great deal of research work is being carried out on the cancer problem, and there are several promising new lines of attack, of which new substances derived from atomic fission provide one example. Cancer is mostly a disease of the middle aged, and the danger period is usually reckoned to start after the age of 40. The keynote of successful treatment is early treatment, so that anyone over

40 who has some symptom which does not clear up within a few weeks should always consult a doctor. Danger signals are loss of weight, persistent or recurrent pain and the appearance of blood, for example from the bowels, in the urine or from the mouth after coughing or vomiting. The chances are that there may be some straightforward explanation and that your doctor will probably be able to put the matter right. If, however, your doctor is at all suspicious he will be able to advise special tests such as X-rays, and if the worst comes to the worst the sooner the proper treatment is started the more likely is a cure.

Carbuncle.

A carbuncle is similar to a boil but more serious since the infection is more deeply situated. Whereas a boil discharges its matter through only one opening a carbuncle may have several. For a small carbuncle the treatment is similar to that described under BOIL, but for most carbuncles it is better to consult a doctor since modern treatment, especially penicillin, may cut the condition short and save a lot of unnecessary pain and discomfort.

Cardiac.

Pertaining to the heart. Thus cardiac insufficiency, for example, means that the heart is working below its normal level. (See HEART DISEASE.)

Cartilage.

A cartilage is a small pad of "gristle" which is found in many joints, and acts as a buffer between the ends of the bones. The most common cartilage to cause trouble is in the knee. A sudden twist, especially in footballers, may cause the cartilage to become torn. When this

happens there is acute pain in the knee, which often becomes locked. Sometimes the cartilage may repair itself with rest, but very often once a cartilage has become torn it is necessary to remove it by operation to avoid further trouble.

Cataract.

This is a condition, usually occurring in older people, in which the lens of the eye becomes clouded. (*See* FIG. 4, page 83). When this happens, less and less light can get to the sensitive retina at the back of the eye, so that vision becomes progressively worse. The outlook, however, is by no means hopeless. Sometimes the condition becomes arrested, or may affect one eye only, and it is now possible to operate in a number of cases and to remove the opacity. Thick glasses must be worn after the operation to replace the lens and to focus the light on the back of the eye.

Catarrh.

This is a very common ailment, especially in civilised communities. There is a chronic discharge from the nose, which is permanently "stuffed up". Often the condition follows a cold. In children it may be associated with ADENOIDS, and in adults it may be due to a sinusitis (*see* ANTRUM). For the catarrh which follows an ordinary cold, relief may be obtained by using a "benzedrine" inhaler during the day, and inhaling Friars Balsam (a teaspoonful to a pint of boiling water) night and morning.

Cellulitis.

A spreading infection of the skin due to invasion by a germ known as a streptococcus. It may follow a small

injury through which the germ is able to enter. The area affected becomes red, swollen and painful, and the patient usually has some fever. The condition calls for expert treatment, but nowadays is usually rapidly cured by the use of penicillin or the sulphonamide (M & B) drugs.

Cerebral.

Pertaining to the brain. Thus a cerebral haemorrhage is a rupture of a blood vessel in the brain. (See STROKE.)

Chancre.

This is a special type of sore which occurs on the genitals, or occasionally on the lips due to infection with syphilis. (See SYPHILIS)

Chicken Pox.

This is one of the infective illnesses of childhood, caused by a virus which is a very small type of germ. Most children suffer from chicken pox at one time or another, usually during the early school years. A second attack is very uncommon. The incubation period is usually about a fortnight, which means that it takes a fortnight to develop after coming into contact with the virus. Sometimes the child is a little off colour for a day or so before the spots develop, but more often the spots are the first symptom. At first they are small red bumps, but soon develop a white top containing fluid and later form a scab or crust. The spots usually appear first on the chest, but later spread to the face and the upper parts of the limbs. The child usually has some fever, and is best kept in bed during the active stage of the disease. The patient should be kept away from others until all the scabs have come off, as these are infective. This usually takes between two and

three weeks. Chicken pox is not a dangerous condition. Complications are rare, and uneventful recovery is the rule. It is interesting that the same germ which causes chicken pox can also cause shingles, so that it sometimes happens that a chicken pox contact develops shingles.

Chilblain.

A chilblain is a red, painful and itching area which develops on the extremities after exposure to cold. The feet, hands and nose are most often affected, and the condition is usually associated with a poor circulation. Those subject to chilblains should take particular care in cold weather, wearing warm socks and gloves. The extremities should not be warmed too suddenly after coming in from the cold, and to toast the toes in front of the fire, for instance, is to ask for trouble. Some sufferers are helped by calcium and vitamin D given in the form of tablets during the winter months.

Chorea.

This is the condition popularly known as St. Vitus Dance. It occurs in children and adolescents in association with rheumatic infection. (See RHEUMATIC FEVER). It is due to a disturbance of that part of the brain which controls movements, and the patient becomes very restless and unable to keep still. In the early stages the first symptom may be clumsiness, so that the child breaks crockery, etc. It is most important that these children should have complete rest in bed, since the heart is also liable to be affected. These cases are usually best treated in hospital, and are often difficult to nurse at home as they are very often emotionally unstable during the time of the illness.

The outlook in chorea is good, for with proper treatment most cases make a complete recovery.

Circumcision.

This is the surgical removal of the foreskin in the male, and is practised as a religious rite in the Jewish race. In the uncircumcised inflammation of the foreskin is liable to occur in later life (*see* BALANITIS), and many parents of other religions have their male children circumcised in infancy as a hygienic measure. There are many arguments for and against, but it is a procedure of which I am personally in favour. Many eminent authorities are, however, against it. If a baby has a tight foreskin (which adheres to the glans penis) and circumcision is not performed, this skin should be drawn back daily at bath time, until it is free. A little vaseline should be applied at the time this is done.

Cleft Palate.

During the normal development of the baby in the mother's womb the roof of the mouth is split down the middle, and the upper lip has two splits one on each side of the centre. Normally these splits join up before birth. Sometimes, however, they remain, and in the mouth the condition is then known as cleft palate, and in the lip as a hare-lip. These conditions may seriously interfere with sucking and therefore the feeding of the baby, but operation can now be performed at a tender age to put the matter right.

Cold.

The common cold is one of the most frequent minor illnesses in civilised communities. It is due to infection

by a virus, and though not dangerous in itself is frequently the forerunner of more serious conditions such as pneumonia. There is no doubt whatsoever that the proper treatment is to stay in bed for two or three days. This benefits both the sufferer, who will recover quickly, and others who will not catch the condition from him. If sufferers could be restrained from travelling in buses and tubes, going to the cinema and generally mixing with others, the condition would become far less common. The best treatment, then, is a couple of days or so in bed. Two aspirins may be taken three times a day; the patient should be kept warm; diet should be light, and plenty of fluids should be drunk. Under these conditions complications are uncommon. For the management of the common complications in neglected cases see the articles on ANTRUM, BRONCHITIS and CATARRH.

Colitis.

This is an inflammation of the colon, which is the large terminal portion of the bowel or intestine (See FIG. 2, page 36.) It is usually associated with some pain in the belly, and with diarrhoea. There are many different causes of this condition which are outside the scope of this book. Medical advice should always be sought if there are symptoms suggestive of colitis.

Coma.

A state of unconsciousness which may be produced by many different causes. These vary from poisoning, for example by alcohol or coal gas, to diseases or injuries to the brain itself. The layman having to deal with this condition should send at once for medical aid. The patient should be made comfortable and kept warm. It

is best to give *nothing* by mouth, since trying to force liquids down the throat of an unconscious person will result in choking more often than not. Anything tight should be removed from the neck, and the patient should be observed carefully to see if he is breathing. If not, artificial respiration may be necessary. (*See ASPHYXIA*).

Concussion.

A state of injury to the brain produced by violence, and which may result in unconsciousness (*see COMA*). Concussion may be associated with other injuries; for instance, a fracture of one of the skull bones, and is often followed by some loss of memory (*see AMNESIA*) and headaches. A medical opinion should always be obtained after a severe head injury, and the treatment until the doctor arrives is the same as that for coma of any cause.

Constipation.

In normal persons the bowels should move once a day, usually after breakfast. In some it is usual for them to move twice in the twenty-four hours. In the condition of constipation the bowels move less frequently, and because of their retention within the body the stools become dried and hard. The condition is extremely common under modern conditions and is due to faulty training in infancy, excessive use of aperients, highly prepared food containing little "roughage", and the lack of exercise in the city dweller. Aperients are now almost universally abused. *It should be realised that nearly all aperients are mild poisons*, and that their action depends upon this fact—the bowels making every effort to eliminate them as quickly as possible. When aperients are taken *regularly* the bowel

gradually becomes insensitive both to the aperient and to the normal call to evacuation. In this way a vicious circle is set up, and more and more aperient has to be taken to achieve the desired effect. Many people dose themselves and their children regularly once a week, but if the bowels are working normally this only serves to disturb their routine, is quite unnecessary, and may be harmful. In avoiding constipation the following are the important points.

In young children, training is vital. The child must be encouraged to have the bowels open at the same time every day—after breakfast. Persistence is often necessary to establish the habit. *Aperients should not be given to children at all unless under a doctor's instructions.* It is fatally easy to reach a condition in which a child's bowels will not work normally without one. The addition of fruit or fruit juice to a child's diet will often correct a slight tendency to constipation. In adults, constipation is often made worse by laziness or the rush to get to work after breakfast. Everyone should allow himself sufficient time for the bowels to work, and should not allow anything to interfere with the normal morning routine. Some exercise, even if it is only to walk home from the station instead of taking a bus, should be aimed at each day, and the diet should be planned to include "roughage"—brown bread, green vegetables, fruits, cereals, etc. If the bowels are still obstinate the best medicines are liquid paraffin or salts. These are not poisons and are therefore not habit forming. Liquid paraffin acts by lubricating the bowel, and a dessertspoonful may be taken each night, and increased or decreased according to the result after a few days. There are many brands of "salts" on the market, and these act by keeping a certain amount of water within the bowel,

and thus increasing its activity. Salts are usually best taken on rising in the morning.

Contraception.

The use of some means whereby sexual relations are prevented from leading to pregnancy. The practice of contraception is now very widespread, and from some points of view, such as the spacing of families, is a good thing. It is still, however, condemned by many, and its use is forbidden by the Roman Catholic Church. It should be clearly realised that no method is completely certain, and that the availability of contraceptives cannot be taken as an excuse for promiscuity. There are several methods in common use. The wearing of a sheath by the male is probably the most reliable, and there are a number of compounds on the market such as "Volpar" which can be inserted into the female passage before the act takes place. In married women a "pessary" or cap can be fitted by a doctor or at a number of clinics and is considered a very good method. "Coitus interruptus" which means withdrawal by the male before the act is completed is sometimes practised. This cannot be too strongly condemned, for the woman is left unsatisfied by the sexual act and in a state of tension. If this practice becomes habitual serious mental and sexual difficulties are liable to develop. It is also harmful to the man.

Contusion.

An injury which does not break the skin. (See BRUISE.)

Convulsion.

A condition in which consciousness is lost, and there is twitching or other movement of part or the whole of the

body. This is often known as a "fit". Fits sometimes occur in young children who have a high temperature, and under these conditions they are not necessarily serious. For further details and for treatment of a fit. (See EPILEPSY.)

Corns.

These consist of small areas of greatly thickened skin which are found mostly on the feet, but sometimes on the hands in manual workers. Their most common situation is on the upper surface of the toes, and they are caused by ill-fitting shoes which rub and irritate the skin until it thickens into a painful lump. The corn may be protected by a corn pad during the painful stage, and those liable to corns should take great care to see that the shoes are well fitting and do not rub or pinch the feet. Soaking the feet in hot water containing a few teaspoons of common salt at night will often relieve the discomfort. For a chronic and painful corn it is best to have skilled treatment. A chiropodist specially trained in the care of the feet, who is licensed by the British Medical Association, and whose charges are usually very moderate, can now be found in most towns.

Coronary Infarction.

The name given to a type of "heart attack" in which one of the small blood vessels supplying the heart itself becomes blocked by a clot. (See ANGINA.) There is a severe pain in the centre of the chest and the victim will often collapse suddenly. He should be put to bed immediately and kept warm until medical help arrives.

Coryza.

The medical name for the common cold. (See COLD.)

Cramp.

This condition is due to the painful spasm or contraction of a muscle. It is often associated with exposure to cold, and may attack swimmers who have been in the water too long. Cramp should be treated by straightening out the cramped part and vigorously rubbing the cramped muscle in order to warm the part and to restore the circulation. Some people are more liable to cramp than others, and especially in hot climates this may sometimes be due to a lack of salt. The simple measure of taking more salt with the diet is well worth trying in these cases. Cramp is most dangerous to swimmers and it is less likely to occur if bathing is postponed for at least 1½ hours after a meal.

Cyst.

A cyst is a collection of fluid in some part of the body, and cysts may develop as a result of disease in nearly all the organs. A common variety of cyst is seen in the skin and is due to fluid collecting in a blocked sweat gland. This causes a lump to form, and often several of these lumps are found in the same person. They are sebaceous cysts, and often known as "wens". The best treatment is by surgical removal, which is usually a very simple minor operation. If left they may become infected by germs and thus cause trouble.

Cystitis.

The medical term for inflammation of the bladder, a condition usually accompanied by pain and frequency in passing water. The bladder lies in the lower part of the abdomen (or belly) and receives the urine from the kidneys (See Fig. 2 on page 36). Sometimes germs gain entry

into the bladder where they cause infection and inflammation. Cystitis is very much more common in women. This is because the germs which most often cause cystitis come from the bowels, and the openings from the bladder and from the bowels are relatively close together in the female. To avoid the danger of cystitis all women should take particular care in their personal hygiene.

D

Deafness.

It is usual with increasing years for the hearing to become less acute. Various diseases may affect the ears during early life and if the delicate mechanism within the ear is damaged some degree of deafness will result. Germs may enter the ear, which is connected by a narrow tube with the throat, following a cold or some other infection. These will cause inflammation within the ear, and the ear drum may become perforated. When this happens there may be a chronic discharge from the ear accompanied by deafness. Another cause of deafness is a gradual thickening of the bones around the inner ear, and in other cases the nerves which carry messages from the ears to the brain may be affected. Nearly all types of deafness can be helped in one way or another. Modern hearing aids are very effective, are inconspicuous, and incidentally are provided free of charge for those who need them under the new National Health Service. There are also operations which are helpful in a few types of deafness.

Death.

The layman is sometimes confronted with a case of sudden death, and one of the most important questions is has death actually occurred, or is there still a possibility of helping the victim? The most important points are to see if breathing (even if very slight) continues, to see if the heart is beating and to note if the body is stiff or cold. To test for breathing look carefully at the chest to see if it moves, and if there is any doubt hold a small mirror close to the mouth and nostrils to see if it becomes clouded by

the breath. If still beating, the heart may be heard by placing one ear on the chest in the region of the left nipple, or the pulse may be felt for on the front of the wrist just below the base of the thumb. If there is no breathing, no heart beat, and particularly if the body is stiff or cold then death has occurred.

If there is any sign of life the patient should be treated as for shock (*see SHOCK*) until medical aid arrives.

Delirium.

A state of restlessness in which the patient is only partly conscious. Delirium usually accompanies a high fever, and the patient may throw himself about, pick at the bedclothes and mutter to himself without ceasing. A delirious patient is nearly always in serious danger, but if for some reason medical help is not readily available it may help to sponge him down with tepid water until the doctor arrives. This will reduce the temperature of the body, and will often quieten the patient down for a while. A special form of delirium known as *delirium tremens* is associated with chronic alcoholism, and may follow an exceptionally heavy bout of drinking. A patient reduced to this condition will require treatment in a hospital or institution.

Dementia.

A state of insanity in which there is serious impairment of all the higher functions of the mind. (*See INSANITY*).

Dhobie Itch. (TINEA).

This is a popular name often given to an infection of the skin with a fungus or yeast-like organism. The condition is contagious (spread by contact) and often attacks those

living in communities such as soldiers, schoolboys, etc. It may be spread by using communal towels, or by contaminated matting in public baths, etc. The areas most often affected are the groins or the feet (between the toes) where the condition is sometimes known as "Athletes foot". The infected parts become inflamed and itch, particularly when the body is warm. The best means of preventing the condition is personal cleanliness, and avoiding the use of other people's towels or clothing. Various ointments are used in the treatment of the condition. "Whitfield's Ointment" applied night and morning is often effective.

Diabetes.

This is a condition in which the body is unable to make proper use of the carbohydrate or sugary foods in the diet. In the normal way carbohydrates undergo a series of chemical changes inside the body with the release of energy which the body is able to use. These chemical changes are controlled by a substance known as insulin, which is made by one of the internal glands, the pancreas. (See Fig. 2, page 36.) In diabetes the pancreas fails to make sufficient insulin so that sugar, instead of being properly used up, accumulates within the body. The kidneys make an effort to get rid of this excess sugar so that the patient with diabetes passes more urine than the normal person, and often has a persistent thirst in consequence. Other symptoms include general ill health, a loss of weight and energy, itching of the skin and a liability to infections such as boils. Diabetes is usually a disease of the middle-aged, and often runs in families, though a family history does not necessarily mean that the condition will develop. There is no real cure for diabetes,

but the condition can be controlled by supplying insulin artificially to make up for the natural insulin which is lacking. This must be done by injection, since insulin is destroyed by the digestive juices. Many diabetics can lead practically normal lives with one injection of insulin each day, though sometimes in severe cases more than one injection is necessary.

Diarrhoea.

This term actually refers to a condition in which the stools are abnormally fluid, but is also commonly used when the bowels are opened more often than the normal once or twice a day. For practical purposes the two conditions nearly always occur together, so that when the stools are fluid the bowels are also opened frequently. There are a great many different causes of diarrhoea. In young children it may follow the eating of too much fruit in the summer months, but in most cases it is due to the infection of the intestines with germs. For a mild attack of diarrhoea the best treatment is to take a dose of opening medicine such as a tablespoonful of castor oil (less in children) to help the bowel to get rid of the infection. This should be followed by a light diet for at least twenty-four hours. If an attack of diarrhoea persists, if it is accompanied by much pain or associated with a raised temperature, a doctor must be consulted.

Diphtheria.

This disease is due to infection of the throat by a special type of germ which produces a very powerful poison. This poison gets into the blood stream and is capable

of damaging the heart, and may also cause paralysis of certain nerves. Diphtheria most commonly affects children, but may also attack adults who have escaped infection at an early age. The disease starts with a sore throat, and the patient often feels more "out of sorts" than one might expect. There is usually some fever, and after a short while a membrane or greyish patch develops on the affected part of the throat. There is a characteristic and unpleasant smell to the breath. The disease is a dangerous one because of the powerful poison which is produced, and is particularly dangerous in young children who are unable to resist its effects. Any suspicious sore throat should always be reported to a doctor who if necessary can give an injection of antitoxin to neutralise the poison. The sooner this is done the greater the chance of complete recovery.

All mothers of young children should have them immunised against diphtheria during the first year of life. The injections, which are given free of charge at many clinics, cause the child to make its own antitoxin against the diphtheria toxin, and this simple measure gives the child a very much greater chance of survival if at any time it is infected with diphtheria.

Diplopia.

The medical term for double vision. This may be due to weakness or lack of balance of the eye muscle, described in the article on SQUINT. Occasionally diplopia may be due to actual disease of the brain, so that anyone who sees double should waste no time in consulting a doctor. It may be that a prescription for glasses is all that is required, but if there should be a more serious cause then the sooner it can be dealt with the better.

Discharge.

The outpouring of fluid from one of the body openings. Thus one can say that there is a discharge from the nose during the course of a cold. A common cause of worry is discharge from the sex organs which is often due to venereal infection (*see* GONORRHOEA.) There are, of course, other causes, especially in women, but it is most important that any discharge of this nature should not be neglected in either sex. There may be some simple and innocent explanation, but neglect in many cases may lead to serious consequences.

Dislocation.

A dislocation occurs when a bone slips out of place. It usually results from violence and may occur at almost any joint in the body. Perhaps the most common is a dislocation of the shoulder, when the rounded head of the humerus (the bone in the upper arm) slips out of its hollow in the shoulder blade or scapula. There is usually considerable pain, and the joint affected becomes fixed. For those unskilled in first aid the best thing is to do nothing apart from making the patient comfortable until medical help arrives. Attempts to move the dislocated bone may cause damage to the joint and must therefore be avoided. The part affected may be given some support, for example by a sling or cushion, until the doctor arrives.

Disseminated Sclerosis.

This is a disease of the nervous system, the cause of which is not known. It affects young adults of both sexes and causes a slow paralysis, most commonly in the legs. Though there is no definite cure, sufferers can usually be

helped considerably by learning to overcome their disability; and prolonged periods of improvement are by no means uncommon in this disease.

Diverticulitis.

An inflammation of the intestine which is due to small pocket forming in the walls of the bowel which become irritated and infected. The condition resembles appendicitis in some ways, but the symptoms are usually felt on the left side over the lower part of the large bowel instead of on the right as in appendicitis. An operation may be required to get rid of the diverticulum or pocket before the condition will settle down.

Dog Bite.

In former times, and even today in other countries, to be bitten by a dog was often a cause for considerable alarm. The reason for this was the disease known as rabies or hydrophobia which caused madness in dogs. The mad dog would become vicious and bite, and those bitten would often acquire the infection from the dog's saliva and come to a painful end. In England today rabies is fortunately unknown. This is due to the very strict quarantine rules whereby all dogs entering the country are isolated and kept under observation for six months to ensure that they are free from this infection. There is still, however, the danger that other germs may be introduced, and all bites are very liable to go septic and to fester. They should always be treated as soon as possible with an antiseptic, and the article on ABRASION should be consulted for details. For severe bites, or bites which have penetrated deeply, it is best to consult a doctor as there is a danger of more serious infection (e.g. CELLULITIS).

Dropsy.

This is not strictly a medical term, but is used very commonly when there is a collection of fluid within the tissues of the body. Due to the influence of gravity the lower parts of the body are those most affected when fluid accumulates, so that first the ankle, then the legs, and later the abdomen become distended. The swollen legs will show a little pit when pressed firmly with the finger, due to the fact that the fluid is temporarily pressed out from the part beneath the finger. There are a number of different causes of dropsy. It is often associated with heart disease when the circulation becomes so sluggish that fluid leaks out from the blood vessels into the tissues. In other cases it may be due to kidney disease, when the kidneys are unable to eliminate excess water which therefore accumulates. Whatever the cause dropsy will always call for expert treatment, and the patient will have to be confined to bed until the fluid disperses. Modern treatment can often greatly hasten recovery.

Drowning.

Drowning occurs when the lungs become filled with water instead of air. Without a continual supply of oxygen from the air the tissues of the body rapidly die. In any case of drowning, therefore, it is most important to restore normal breathing so long as there is the slightest chance of recovery. See the article on ASPHYXIA and ARTIFICIAL RESPIRATION.

Duodenal Ulcer.

Food which is eaten passes into the stomach where it is partly digested by the acid gastric juice. It then enters

the intestine, which is a long coiled up tube within the abdomen. (See Fig. 2, page 36). It sometimes happens, particularly under modern living conditions, that ulcers develop in the upper part of the digestive tract. Their cause is not precisely known, but in some cases they appear to be associated with an excess of acid in the gastric juice, and often follow a period of strain or worry. Once an ulcer has developed in the stomach or duodenum it is difficult to heal since the continual passage of food and the action of the digestive juice serves to keep it open.

In duodenal ulcer there is usually a pain which remains fairly localised a little above the navel. This pain comes on an hour or so after meals, and may last for the best part of an hour before it wears off. Sometimes there may be a feeling of sickness, occasionally actual vomiting. Flatulence (wind) is common. All ulcers require careful treatment under medical supervision, for if they continue there is a danger of internal haemorrhage (bleeding) or of the ulcer eating right through the wall of the intestine and thus causing a perforation.

The main points in treatment are a light diet, rest in bed for severe cases, alkalis at regular intervals to neutralise the gastric acidity and freedom from worry. All ulcer cases show periods of improvement at intervals, but this does not necessarily mean that the ulcer is healed. It is important to continue on diet for a considerable time, usually at least six months, before healing becomes firm. Be guided by your doctor's advice and even if you feel quite fit do not be tempted to give up the diet he has prescribed until he is quite satisfied that it is safe for you to do so. In certain instances operative treatment may be resorted to.

Dysentery.

A disease caused by infection of the intestines by one of the members of a group of germs which cause inflammation to the walls of the bowel. The germs can be spread by contact, by food, by water and by flies. The disease is not very common in this country, where it usually occurs in the warm weather, but is very much more common in warm climates. The symptoms are diarrhoea, which may be accompanied by a little blood in the stools, frequent stools, colicky pain in the stomach and usually some fever. Modern methods of treatment with the sulphonamide (M & B) group of drugs will often cut short an attack.

There is another type of dysentery which occurs in the East, not due to germs but caused by a small animal parasite which burrows in the wall of the intestine. This is known as *amoebic dysentery*, and although the symptoms are usually less severe it runs a very much more chronic course than bacillary (germ) dysentery and is often difficult to cure.

Dyspareunia.

This is the medical term given to painful or difficult sexual intercourse. In the woman there is nearly always some difficulty the first time that intercourse takes place. The entrance to the vagina (or female passage) is more or less sealed by a membrane known as the hymen, and this must be broken before full penetration can take place. In some cases where the early attempts have been clumsy or painful the woman becomes frightened (perhaps only subconsciously) so that subsequent union is made difficult for her and her partner. In other cases dyspareunia is due to actual disease or inflammation of the sex organs, though this is not so common. Numbers of marriages are doomed

to failure each year because the young couples are for one reason or another unable to establish a proper physical union, and it is most important that advice should be sought on this matter if there is any continued difficulty.

Dyspepsia.

A rather loose term covering a number of different types of indigestion. Dyspepsia usually implies discomfort and flatulence following meals. It may be due to over indulgence in food or drink (*see* ACIDITY) and at other times is associated with definite internal disorders, such as ulcers (*see* DUODENAL ULCER) or gallstones.

E

Earache.

This may be due to a number of causes. Infection of the ear (see DEAFNESS) may follow a cold. Small boils, known as furuncles, sometimes develop in the canal leading down from the outer ear to the ear drum, and sometimes these are associated with the presence of wax in the ears. The amount of wax produced varies greatly from person to person, but sometimes it is sufficient to block the ear completely, and to cause discomfort. When this happens it must be removed by gentle syringing (by a doctor). Earache is often a cause of worry in children, and if it does not quickly settle down, or if it is associated with any fever, the child should always be taken to a doctor. Serious consequence may follow neglect. (See MASTOIDITIS.)

For the relief of earache, a little olive oil warmed in a teaspoon and poured in the affected ear will often help as a temporary measure.

Ectopic Pregnancy.

A pregnancy which occurs outside the uterus or womb. The womb is connected near its top end by means of two hollow tubes with the two ovaries. The female germ cell or ovum passes down these tubes (the fallopian tubes) into the uterus, and when fertilisation takes place the ovum normally lodges in the uterus itself. It occasionally happens, however, that the fertilised ovum lodges in one of the tubes. When this occurs there is far too little room for the ovum to grow, so that trouble soon develops. Often there is pain in the lower part of the abdomen on one side, and if the condition continues the fallopian tube may

actually burst. The treatment of an ectopic pregnancy is by operation.

Eczema.

A chronic skin disease in which the most prominent features are redness, soreness, weeping and irritation. The condition is often seen on the hands and on the arms, where it tends to affect the inner surface particularly the skin folds at the elbows and wrists. The condition is often due to sensitivity of the skin (*see* ALLERGY) and similar conditions such as asthma or hay fever may be met with in the same family.

Eczema is not uncommon in small babies, and sometimes a particular article of diet such as eggs or chocolate may be found to be responsible. In this type of case the child will often grow out of the tendency to develop eczema. The treatment of an established case of eczema is difficult, and often calls for great patience on the part of the doctor as well as the patient. If a definite cause can be found then its elimination will go a long way to curing the complaint, but all too often it is difficult to discover, or there may be many causes. Various ointments or other preparations may help, and in severe cases X-ray treatment is sometimes of benefit.

Electric Shock.

The use of electricity is now almost universal, and more and more electrical gadgets appear each year. It is hardly surprising that the number of accidents is also growing, and with them the number of deaths. The danger from the passage of electricity through the body is twofold. Firstly, there may be an actual burn at the points where the electric current enters and leaves the body. This

is seldom serious of itself, and may be treated on general lines. (*See* BURNS.) Secondly the electric current has a paralysing effect on muscles and nerves, and may thus damage the brain, or the nerves of the spinal cord. Sometimes the muscles which move the chest are paralysed so that breathing stops.

When a person suffers a severe electric shock first make certain that contact with the current is broken. Do not touch the victim with your hand to do this or you will suffer a shock yourself, but use some non-conducting material, a stick, a wooden chair, a cushion—something dry and *not* containing metal. Next see if the victim is breathing. If he is he may be kept warm and made comfortable but if not apply artificial respiration (*see* ASPHYXIA) until medical help arrives. (*See also* ARTIFICIAL RESPIRATION).

Electric shocks are best prevented, and great care with switches, etc., especially in bathrooms (for water acts as a conductor) is recommended.

Embolism.

A clot of blood which is carried round the blood stream until it lodges in a blood vessel and blocks it. This will always cause serious trouble in the organ in which the blood vessel becomes blocked. Thus a cerebral embolism is a blood clot in one of the arteries of the brain and is one cause of a stroke (*See* STROKE.)

Empyema.

An empyema can be described in simple terms as an abscess on the lung (*see* ABSCESS). The lung is enclosed in a double layer of thin membrane which protects it, and if the lung becomes inflamed fluid may form between the

layers of this membrane. If germs spread from the lung this fluid may become infected, pus or matter forms, and an empyema has developed. This may sometimes happen following pneumonia. Sometimes the condition can be cured without operation by modern methods such as penicillin, but it is often necessary to operate and drain away the pus before the condition will subside.

Encephalitis.

The medical term for inflammation of the brain. This is always a serious condition, and is due to infection by germs—usually the very small germs known as viruses. The patient with encephalitis is always seriously ill, and may be unconscious or delirious. The outlook is not very good since even if the patient recovers parts of the brain are sometimes permanently damaged. In some cases, however, a complete recovery does occur.

Enteric Fever.

This is an infection of the intestines with the typhoid group of germs, and is also often known as typhoid fever. The symptoms are similar in many respects to those of dysentery (*see* DYSENTERY) but the disease is more serious. Cases should invariably be treated in hospital, and may require prolonged and careful nursing before recovery is complete.

Enuresis.

This is the medical term for bed-wetting, which all too often becomes a troublesome complaint in children. The age at which a child gains full control of the bladder varies considerably from child to child; but certainly by the age of three, and often long before, control should be achieved.

As with the bowels, so with the bladder, training of the young child is vitally important. All children should be "potted" last thing at night and first thing in the morning so that the habit of remaining dry throughout the night will become gradually established. In some cases an older child who has gained full control of the bladder will suddenly start to wet the bed. This is due to some emotional upset, usually faulty management on the part of the parents, or some upset in the home. It is useless to scold the child in such circumstances; he is already sufficiently upset and ashamed. A little gentle encouragement, restricted fluids last thing at night, and insistence that he wakes to pass water before the parents retire will usually re-establish control in a short while. For any case of persistent bed-wetting after the age of three a doctor should be consulted. Sometimes the condition is due to irritation associated with threadworms; occasionally there is some definite abnormality in the bladder itself or in the nerves which control it. In the vast majority of cases, however, there is no physical abnormality; and bed wetting in children is far more often due to bad management by the parents than to any abnormality in the child. Patience, common sense and the absence of undue fussing in front of the child are the keystones of successful treatment. A waterproof sheet above the mattress will prevent damage to it.

Epilepsy.

A disease in which the patient suffers from recurrent fits. The cause of epilepsy is not definitely known, but there appears to be some inherent instability in the make-up of the brain, so that every so often there is a sudden release of energy. Epilepsy tends to run in families, but

usually many members escape the disease entirely. The age at which the fits first start varies considerably. Sometimes it is in childhood; not infrequently it is at the time of puberty, and sometimes it may be as late as 30. Very often the patient has some warning just before a fit occurs. He sees flashes of light, or may experience some peculiar sensation. This is known as the aura. Following this there is often a cry and the patient falls to the ground unconscious. At first the body is stiff and rigid, but after a short while rapid jerking movements occur which gradually diminish. The patient often goes blue in the face, and may bite his tongue or pass water during the fit. During the fit itself it is best to do as little as possible. If the patient can be caught as he falls injury may be prevented. He should be allowed to lie flat until the fit is over, the neck should be examined to see that it is not constricted by tight clothing, and if anything suitable is available, such as a rolled up handkerchief, it may be pushed between the teeth to prevent injury to the tongue. After the fit the patient should be put to bed for a while, and he will often sleep.

In some cases of epilepsy there is a loss of consciousness without an actual fit occurring. The frequency of fits varies very greatly from case to case. Sometimes there may be one or two a year, sometimes several every week. Sometimes the fits tend to occur at a definite time (e.g. in women at the time of the "periods"). In general, epileptics should lead as full a life as possible, but they must of course avoid occupations in which a fit would prove dangerous such as driving, window cleaning, or proximity to moving machinery. Modern methods of treatment, particularly recent discoveries of new drugs, can do a great deal to help the epileptic. In most cases

proper treatment can bring about a very great reduction in the frequency of the fits.

Erysipelas.

This is a spreading infection of the skin and is similar in many ways to cellulitis (*see* CELLULITIS). In erysipelas, however, the streptococcal infection spreads within the skin itself instead of just beneath the true skin as in cellulitis. The treatment of the two conditions is similar.

Eye, Inflamed.

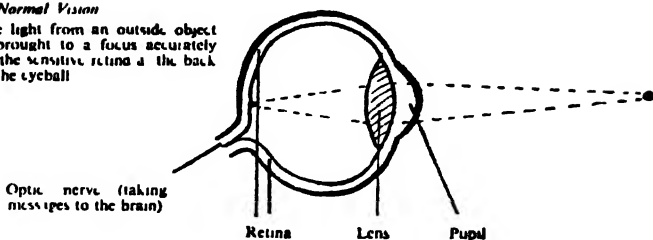
It goes almost without saying that vision is one of the greatest assets of mankind, and blindness one of the greatest handicaps. Care of the eyes is therefore of considerable importance. Inflammation of the eyes may be due to many causes. Eyes which are constantly becoming red and irritable, particularly towards the end of the day, are probably being strained; and if there are headaches as well, eye strain is even more likely. It is probable that there is some slight irregularity in the lens which makes the focussing of light on the back of the eye difficult. The lens may be too flat, which makes the focussing of distant objects easy, but near vision difficult—the condition of long sightedness or *hypermetropia*. If the lens is too curved there is *myopia* or short sightedness; while if the lens is irregular, being too curved in one direction and too flat in another, the condition is described as *astigmatism*. All these errors require glasses for their correction, and if there are symptoms of eye strain, advice should be sought to see if glasses are required.

Various germs can set up inflammation in the eye, a condition known as *conjunctivitis*. For mild cases the eyes may be bathed (preferably with an eye bath) with

DEFECTIVE VISION

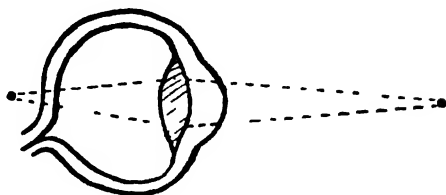
1 Normal Vision

The light from an outside object is brought to a focus accurately on the sensitive retina at the back of the eyeball.



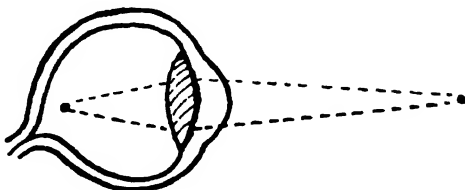
2 Hypermetropia (Long sightedness)

The eyeball is too short or the lens is too weak so that the light comes to a focus *behind* the retina. Distant objects can be seen more clearly than near ones. Convex glasses are required to correct this error.



Myopia (Short sightedness)

The eyeball is too long or the lens is too powerful so that the light comes to a focus *in front* of the retina. Near objects can be seen more clearly than distant ones. Concave glasses are required to correct this error.



4 Astigmatism

Either the eyeball or the lens is irregular so that light is brought to a focus at different levels in different parts of the eye. Special glasses have to be made to correct the individual error in astigmatism.

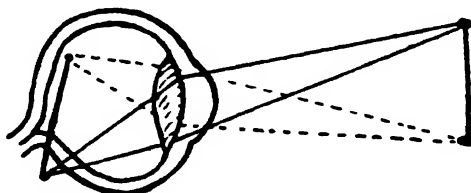


Figure 4.

water containing a pinch of boric acid, and a little boric ointment may be smeared on the lids at night to prevent their sticking. If the inflammation does not subside quickly a doctor should be consulted, as neglect may lead to ulceration or other dangers. Strong sunlight can also cause inflammation, and the eyes should be protected by dark glasses during the summer, especially at the seaside where the glare can be very strong.

Another common cause of irritation is small particles lodging in the eye—technically known as *foreign bodies*. The eye containing a foreign body should on no account be rubbed, as this may damage the delicate membrane. The lids should be held open and the eye carefully inspected—under the top lid with the patient looking down, and under the lower lid while looking up. If the particle can be seen it should be gently removed with a wisp of cotton wool or the corner of a soft handkerchief. Sometimes gently pulling the upper lid over the lower will remove the particle. On no account poke the eye with anything hard such as a matchstick. If the particle cannot be seen or cannot be moved, a few drops of oil should be put into the eye (castor oil or olive oil are both suitable) and the patient should be taken to the doctor.

F

Fainting.

A faint is a momentary loss of consciousness for which there are many different causes. The large majority of faints are not in any way serious and quickly pass. Their cause is largely emotional. Thus some people regularly faint at the sight of blood, others faint in church or on receiving bad news. These factors cause a temporary upset in the nervous control of the body which results in the faint. People vary greatly in their nervous make-up, and some go through life without ever fainting, while others faint readily when upset. The person who faints should be made comfortable and kept flat until the feeling of faintness passes. Nothing more is required, and *it is unwise to try to force fluids (brandy, etc.) down the throat, as this may cause choking.* For a feeling of faintness the best way to ward off an actual faint is to sit down and bend the head between the knees as far down as possible, and to stay in this position until the feeling has passed.

In a few cases fainting may be a symptom of some definite disease. It may occur, for instance, in ANAEMIA or sometimes in heart disease. In general a single faint, particularly where there is some emotional cause, should not be the cause for any alarm. If, however, a patient faints repeatedly and apparently without reason a doctor must be consulted to see if there is any underlying cause.

Fainting is common among soldiers, standing *too* stiffly to attention—it can be prevented by standing less rigidly.

HOW TO TAKE THE TEMPERATURE

1. Hold the thermometer between the finger and thumb at the top end, away from the bulb.

2. Stand facing the light and hold the thermometer horizontally a little below the eyes. Find the markings and figures which show the level of the temperature.

3. Roll the thermometer slightly, backwards and forwards, between the finger and thumb. In one position the light will be reflected from the mercury in the small central tube.

4. If the mercury is up in the stem of the thermometer shake it down into the bulb with a few vigorous jerks.

5. Look again and make quite sure that the mercury is down. Place the thermometer bulb well inside the mouth beneath the tongue, or, in the case of a child, in the armpit while holding the arm to the side.

6. Leave the thermometer in the mouth for at least a full minute, or beneath the arm for two minutes.

7. Hold the thermometer up to the light again, and find the mercury level as described above (3).

8. Compare the mercury level with the readings. The degrees are marked by numbers—97, 98, 99, etc. — and between each number are marked ten small divisions. Find the number next below the mercury level and then count up the small divisions until the level is reached. This gives the temperature. Thus if the mercury is three divisions above 99° the temperature is 99.3 (ninety-nine point three). In most thermometers the normal temperature level (98.4) is marked by a small arrow.

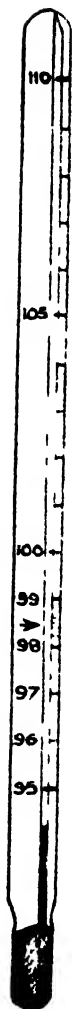


Figure 5.

Festering.

A term often used to denote Sepsis and the formation of pus or matter. (See ABSCESS.)

Fever.

Many of the lower forms of animal life are unable to regulate their body temperature, and therefore remain hot or cold according to the temperature of their surroundings. In the higher forms of life the temperature is controlled by the body itself and remains steady. The temperature of the human body in particular is very carefully regulated, and under normal circumstances varies very little. It is usually about 98° Fahrenheit and should not exceed 99° 1°. When the body is attacked by germs a complicated defence system comes into play, and one of the body's reaction is to increase the temperature at which it works. This serves two purposes. Firstly, the raised temperature is often unsuitable for the germs themselves so that they can be more easily destroyed, and secondly, as the temperature is raised the internal workings of the body are speeded up so that it can work more quickly and efficiently. When a chemist wishes to speed up the reaction of two chemicals in a test tube he warms them over a flame, and similarly when the body wishes to speed up its own reactions (or general metabolism) it increases its temperature. The condition of *fever* is one in which the temperature is raised above the normal.

It will be seen from what has been said that the temperature of the body can be a very useful index. If the body is attacked by germs and there is no fever, then in general it can be said that the attack is not a serious one. If, however, the temperature is raised, then the body is taking serious notice of the invasion, and the higher the

temperature the more serious is the condition likely to be.

Every household should possess a clinical thermometer with which it is a simple matter to measure the temperature. In case of illness the temperature should be taken (see FIG. 5, page 86) and if there is any fever the patient should be put to bed and the doctor asked to call. It is most unwise to remain up and about with a raised temperature since the body is already working under a handicap, and is more susceptible than usual to further attack by germs. Many serious illnesses such as pneumonia could be avoided if this simple rule were always obeyed. It should be remembered that young children run a temperature much more easily than adults. While a raised temperature in a child should certainly never be neglected, a high temperature should not be the cause of undue alarm, for even with minor infections children sometimes run temperatures of 103 or 104 without being seriously ill. In adults these high temperatures are serious and the patient definitely on the danger list.

Fibroids.

These are small lumps or tumours which develop in the wall of the uterus (womb). They become increasingly common as middle age is approached. Occasionally they are associated with some pain in the lower part of the abdomen, and sometimes there may be an actual lump beneath the wall of the "tummy". Usually, however, the chief symptom is increased loss—"flooding" at the time of the "period", or sometimes bleeding between "periods". Sometimes the condition can be treated without operation, but it is usually best to operate and remove the tumour. It should be clearly realised that fibroids are not dangerous in themselves, and that the

tumours are not in any way malignant or connected with cancer.

Finger, Septic.

Infection by germs in the soft tissues of the finger is a common occurrence, and can lead to serious disability if not properly treated. The infection may follow a prick or some other injury, but quite often the breach in the skin is so small as to escape notice. The finger becomes red and swollen, hot to the touch and throbs continually. Treatment by means of hot fomentations (*see* BOIL) should be started as early as possible. It is always best, however, to consult a doctor for any infection of the finger. If the infection spreads to the base of the nail it will very often become chronic and may fail to clear up until the nail is removed. A further danger is that the infection may spread to involve the tendons (leaders) which move the finger joints, and if this happens the finger may remain permanently stiff.

Fissure-in-Ano.

The opening from the last part of the bowels (the "back passage") is guarded by a circular muscle and is known as the anus. It sometimes happens that a small split develops in the anus in the same way, for instance, as a split may develop at the corner of the mouth. This is known as a fissure-in-ano. There is usually considerable pain each time the bowels are opened, and there may be a little bleeding. Infection by germs and the fact that the anus is stretched each time the bowels are opened makes healing of the fissure very difficult. It is usually necessary therefore to have a small operation to close the split and restore conditions to normal.

Fits.

Attacks in which consciousness is lost and jerking movements of the body occur. (See CONVULSIONS and EPILEPSY.)

Flat Foot.

The human foot is a remarkable piece of engineering. It has to support the whole weight of the body for long periods at a time, and to put up with tremendous stresses and strains during walking, running and jumping. As with man-made structures designed for weight bearing, the foot is constructed on the principle of the arch. There are really two arches formed by the bones of the foot; the longitudinal arch running from front to back, and the transverse arch from side to side. The bones are kept in place by the action of muscles, tendons and strong ligaments which bind them together. In the condition of flat-foot the normal arch sags so that the foot is less easily able to take the weight, and rapidly becomes tired and painful.

In many cases, particularly in children, the condition can be remedied by exercises designed to strengthen the muscles and ligaments, and thus restore the normal arch. In other cases where the arch is permanently weakened considerable help may be gained by wearing arch supports within the shoes, or specially designed shoes having a built-in steel arch.

Flatulence.

The escape of wind from the digestive tract. The term is usually applied to eructations from the stomach ("belching") but is also used to describe wind from the bowels. Flatulence is often a symptom of disordered digestion (DYSPEPSIA) and is sometimes associated with a

definite internal disorder such as ulcer. In many cases, however, flatulence is no more than a habit which is kept up unconsciously by the patient. In many cases a considerable quantity of air is swallowed during and after meals, and it is this alone which is responsible for the wind which follows. It is often instructive for a patient who suffers from flatulence to sit with a cork between the teeth for half an hour after meals which prevents the swallowing of air, and the patient is often amazed to find that his flatulence is cured by this measure.

Flooding.

A term commonly used to describe an excessive loss at the time of the monthly "period" in women. (See MENORRHAGIA.)

Flushing.

Hot flushes are often a distressing feature of the menopause in women. At the time of the menopause, when childbearing becomes no longer possible, there is a considerable functional upheaval within a woman's body; and during the period of change the balance between the functions of various internal glands and the nervous system becomes temporarily upset. The attacks of flushing which are so common at this time are one symptom of this upset. They can often be brought under control by administration of glandular extracts which can be prescribed by a doctor. (See also MENOPAUSE.)

Food Poisoning.

There are two distinct varieties of food poisoning. In the first the food itself may actually be poisonous, for

example, when some poisonous fungus is eaten in mistake for a mushroom. In the second the food itself is innocent, but is invaded by germs and goes bad; and it is the poison produced by the germs which is responsible for the symptoms. Tinned foods which have been opened and then left standing are particularly liable to "go off" in this way. In either case the body usually makes every endeavour to get rid of the poison, and a feeling of discomfort in the stomach is soon followed by vomiting. At a later stage there is usually some diarrhoea. Unidentified foods should never be eaten, and one should be particularly suspicious of mushrooms which have been gathered by anyone but an expert. Many of the simple tests such as peeling or the turning of a silver spoon black are not reliable as numbers of people have learnt to their cost. With regard to the common household foods, if there is any suspicion as to their wholesomeness they are better discarded. Far better a small waste than a serious (occasionally fatal) illness. Tinned foods which have been partly used, and foods which have been cooked and left standing, particularly in hot weather, should always be regarded with suspicion.

If food poisoning is suspected the remains of the meal should be preserved, and medical help should be summoned. Vomiting will help to get rid of the poison, and while waiting for help this can be promoted by drinking a tumbler of water containing a dessertspoonful of salt. The index finger inserted down the throat may help to start vomiting. The patient is best in bed and should be kept warm.

Fracture.

A fracture is a break in a bone, and the treatment of

this condition falls outside the scope of this book which is not intended to be a first aid manual. For those unskilled in first aid the guiding rule in dealing with fractures should be to do as little as possible. To move the injured part will often cause further damage. The victim should be made comfortable, treated for shock (*see SHOCK*), and the injured part given some support (with as little movement as possible) until medical help arrives.

Freckles.

The human skin is capable of producing a pigment which protects it against the rays of the sun. That is why the exposed parts turn brown after sunbathing. In many people this pigment is distributed quite evenly so that the skin becomes uniformly brown, but in others the pigment forms in small patches, which are known as freckles. In women these are sometimes a cause of annoyance (though many men find them not unattractive). There is unfortunately no effective treatment for freckles, and if you have the type of skin which pigments in patches instead of all over this cannot be changed. The only way to avoid freckles is to avoid exposure to the sun as far as possible.

Frost Bite.

This condition is very similar to a burn; in the one case the tissues are damaged by heat, and in the other by cold. The condition develops in the extremities after exposure to cold, and can be guarded against by wearing warm clothing, and by maintaining a good circulation. Tight garments on the limbs or extremities will restrict the circulation, and thus favour the development of frost bite.

A part which has become white and numb after exposure to cold should be warmed *gradually*, and may be rubbed *gently* to help restore the circulation. Sudden warming or vigorous rubbing are both harmful, and may damage the tissues still more.

G

Gall Bladder.

The gall bladder is a small hollow sac attached to the liver. (See FIG. 2, page 36). It receives bile which is made by the liver, and pours this into the first part of the intestine (the duodenum) where it helps in digestion. The gall bladder is sometimes attacked by germs, and becomes inflamed—a condition known as *Cholecystitis*. In some cases stones form within the gall bladder, and they may cause attacks of pain, and be associated with flatulence and indigestion. Suspected gall stones can usually be seen by X-ray examination, and if present they are often best removed by operation.

Gangrene.

A condition in which a part of the body dies. It is usually due to interference with the circulation, and may result from a blood clot in the vessel supplying the part (see EMBOLISM); or it may simply be due to progressive narrowing of the blood vessels until they are unable to carry enough blood to keep the part alive. This type of gangrene is not uncommon in the aged, and usually attacks the toes which become blackened and shrivel.

Gas Poisoning.

See ASPHYXIA AND ARTIFICIAL RESPIRATION.

Gastric Ulcer.

The article on DUODENAL ULCER should be consulted. Gastric ulcer is a similar condition arising in the stomach. The pain following meals comes on rather earlier than in duodenal ulcer—usually in about half an hour, but apart

from this the symptoms differ little, and the treatment for the two conditions is very similar.

Gastritis.

Strictly speaking this means inflammation of the stomach, and it may follow excessive consumption of alcohol or various types of poisoning. Often, however, the term is used when some form of indigestion is present. The articles on ACIDOSIS and DYSPEPSIA should be consulted.

General Paralysis of the Insane (G.P.I.).

A condition in which the brain and nervous system are severely damaged, causing paralysis and insanity. It is due to invasion of the nervous system with the spirochaete or germ of syphilis, and is one of the late results of neglected syphilis. (See SYPHILIS.)

German Measles.

This is one of the acute infectious illnesses of childhood, and most children suffer from it at one time or another, usually during the school years. The disease is also known as Rubella. As with the other infectious illnesses of this nature a second attack in the same individual is uncommon. The disease is spread by contact between children, and often occurs in epidemics in schools. The incubation period (the time between contact and the development of symptoms) is generally about a fortnight, but may be as long as three weeks. The disease often resembles a "cold" at the start, the child having a running nose and eyes, and some fever. There is often some enlargement and tenderness in the glands at the back of the neck. The rash usually follows the other symptoms after a short interval,

but in some cases is the first symptom to develop. At first it resembles the rash of measles, consisting of slightly raised round or oval spots, but these spots soon run together so that there is an almost general redness of the skin resembling the rash seen in scarlet fever. The rash usually fades after about three days, and may be followed by slight peeling of the skin. German measles is not a serious disease and complications are very uncommon. The child is best kept in bed during the early stages, but when the temperature returns to normal and the rash fades, the child can be allowed up. The patient should be isolated (kept away from other children) for ten days after the rash appears.

Germ.

The popular name given to small living organisms, which are capable of invading the body and causing disease. The study of germs or bacteria is comparatively modern, as it was not until 1870 that their role in the causation of human disease was suspected. Bacteria are extremely small, and are measured in microns, each micron being approximately 1/2,500th of an inch. There are many different types of bacteria, the spherical known as a coccus, the rod-shaped known as a bacillus, etc., and each type is divided into different members, so that we have, for instance, the staphylo-coccus which occurs in bunches, and the streptococcus which occurs in chains. In general it can be said that each particular type of germ is responsible for a definite disease. There is a further group of extremely small germs, which cannot be seen even with a powerful microscope. These are known as *viruses* and are responsible for many diseases including the common cold and influenza.

GERMS

1. *Spheres**Coccus.**Staphylococcus.*

Occurs in bunches.
Causes skin infections such as boils.

*Streptococcus.*

Occurs in the form of chains.
Causes more serious infections.

*Gonococcus.*

Occurs in pairs.

2. *Rods**Bacillus.**Bacilli in chains.*

Some bacilli have cross markings like stripes, e.g. the bacillus of Diphtheria.



Others develop small bumps which are spores, e.g. the bacillus of Tetanus.

3. *Spirals**Spirochaete.*

The germ of Syphilis is a spirochaete having small undulations.



The *vibrio* which causes cholera in hot climates is a small "comma" shaped germ.

Figure 6.

Giddiness.

The ear as well as being an organ of hearing is also an organ of balance; and there is a special part of the inner ear made up of delicate little tubes containing fluid, which helps us to maintain our equilibrium. When this is upset we have a sensation of outside objects moving around, and this can be seen when the inner ear is over stimulated by rapid turning (e.g. on a piano stool). Sometimes this part of the ear may be irritated by disease, and in this case giddiness may result. In other cases giddiness is not caused by any abnormality in the ear but is merely associated with a feeling of faintness. (See FAINTING.)

Glands.

There are many glands within the body which have different functions to perform. Thus there are sweat glands in the skin, or the salivary glands which produce the saliva. The unqualified term glands, however, usually refers to the lymphatic glands, which are about the size of a pea and are distributed over the body. One of their functions is to filter out the poisons which are liberated when germs invade the body, and when this happens the glands often swell. Thus when germs invade the throat the glands in the neck will often swell up; and with a septic finger, for instance, a swollen gland may often be felt on the inner side of the elbow.

Glandular Fever.

An infective illness, possibly caused by a virus. It most commonly attacks children, but may affect adults, and the chief symptoms are sore throat and enlargement of the lymphatic glands, often throughout the body (see GLANDS.) The disease is accompanied by fever, and occasionally

there is a mild rash. The condition often lasts for several weeks, but is not usually dangerous, and serious complications are uncommon.

Glycosuria.

The medical term for the presence of sugar in the urine. Normally this should not occur since the sugar is burnt up and used by the body. The most common cause of this condition is DIABETES, but occasionally glycosuria occurs apart from this disease, in which case it is not serious, but is merely due to a slight abnormality on the part of the kidney.

Goitre.

The name given to an enlarged thyroid gland. The thyroid gland is situated in the front of the neck on either side of the windpipe, and it manufactures a substance known as thyroxin which it pours into the blood stream. Broadly speaking thyroxin controls the speed at which the body works. With an excess of thyroxin the body speed up its activity—the heart beats faster, etc; with a lack of thyroxin the body slows down. An enlarged thyroid gland may be associated with either too much or too little thyroxin. If there is too much the goitre is said to be “toxic” or the condition may be spoken of as *thyrotoxicosis* or *Graves disease*. If there is too little thyroxin the body becomes fat and sluggish and the condition is known as *Myxoedema*. For a toxic goitre it is often necessary to operate and remove part of the gland, but sometimes operation can be avoided, especially by using new drugs which are capable of damping down the action of the thyroid. For the condition of myxoedema, it is necessary to give the patient thyroid extract by mouth

to restore the normal working of the body. Sometimes the condition of goitre is due to a deficiency of iodine in the diet, and it tends to occur in certain areas where the water is lacking in iodine.

Gonorrhoea.

This is one of the venereal diseases, or diseases spread by sexual intercourse. It is due to a specific germ, the gonococcus (FIG. 6, page 98) which invades the sex organs and sets up an inflammation. In the male the symptoms usually commence about four days to a week after intercourse, and there is pain on passing water, and a thick usually yellowish discharge from the penis or male organ. In the female the symptoms may be somewhat delayed and sometimes rather indefinite, but pain and some discharge from the vagina (female passage) are usually present. Gonorrhoea can be rapidly cured nowadays with modern methods of treatment including the sulphonamide (M & B) drugs and penicillin, but treatment should be started early to ensure the best results. Neglected Gonorrhoea can have serious consequences. In the female it may spread and result in sterility or serious internal disorders, and in the male it may spread to affect the testicles (*see* ORCHITIS). Other unpleasant sequels to neglected gonorrhoea are acute arthritis (*see* ARTHRITIS), and the baby of an untreated mother may develop an infection of the eyes which leads to blindness. It cannot be too strongly emphasised that if there are *any* symptoms suggestive of gonorrhoea a doctor should be consulted. If the disease is present treatment must be continued until blood tests show that cure is complete. To neglect symptoms or to try to treat oneself by "quack" remedies and without proper control is to store up a large packet of

trouble for the future—not only for oneself but also possibly for others who may become infected.

Gout.

A disease which appears to be less common than it was a generation or so ago, in which chalky deposits form in the joints. The precise cause of gout still remains obscure, but the traditional view that it is associated with the excessive consumption of alcohol still commands serious attention. Gout is usually a disease of middle-aged men, but sometimes occurs in earlier life and is occasionally seen in women. The joint most often affected is at the base of the big toe, and the disease manifests itself by recurrent attacks of severe pain. Many other joints can also be involved. Treatment consists briefly in moderation in drinking and in diet, and in resting the joints during the acute attacks. Various drugs can be used to lessen the severity of the pain.

Gumma.

A painless sore which develops in the skin and other organs in the late stages of syphilis. (*See* SYPHILIS.)

Hammer Toe.

A condition in which one of the toes, usually the second, becomes bent downwards at right angles. Very occasionally this may be present from birth, but more often it is due to the wearing of tight and cramping shoes in childhood. It is most important that the child should be allowed enough room for the foot to grow within the shoe, and parents must keep a watchful eye to see that the toes do not become cramped. In the early stages of hammer toe the condition may often be corrected by manipulation; but if it is neglected the toe will eventually become quite fixed, and an operation will be necessary to straighten it.

Hare Lip.

A deformity at birth in which there is a deep split in the upper lip. It is curable by a plastic operation. (See CLEFT PALATE.)

Hay Fever.

This is an allergic disease (*see* ALLERGY) in which there is an abnormal sensitivity to pollens. During the summer months flowers and grasses produce thousands of small particles which are carried from plant to plant by the air, and by bees and other insects. These particles are the "germ" from which the seeds are eventually produced, and unless one flower is fertilised by the pollen from another it will remain sterile. In the normal way this pollen is not harmful to man, but in a few who are sensitive to it, it produces an intense irritation of the nose and eyes. The hay fever season usually lasts from about May until July, but varies from person to person according to which pollen is responsible for the symptoms. A sensitivity to grass pollen is the most common in this country. Much can

be done to help the sufferer. Tests can be performed by injecting various pollen extracts into the skin to find out which one causes symptoms. Following this a course of injections can be given in which the pollen extract is used in gradually increasing doses. In this way the sufferer can be "desensitised". There are also various new drugs such as "benadryl" which largely neutralise the irritating effect of the pollen.

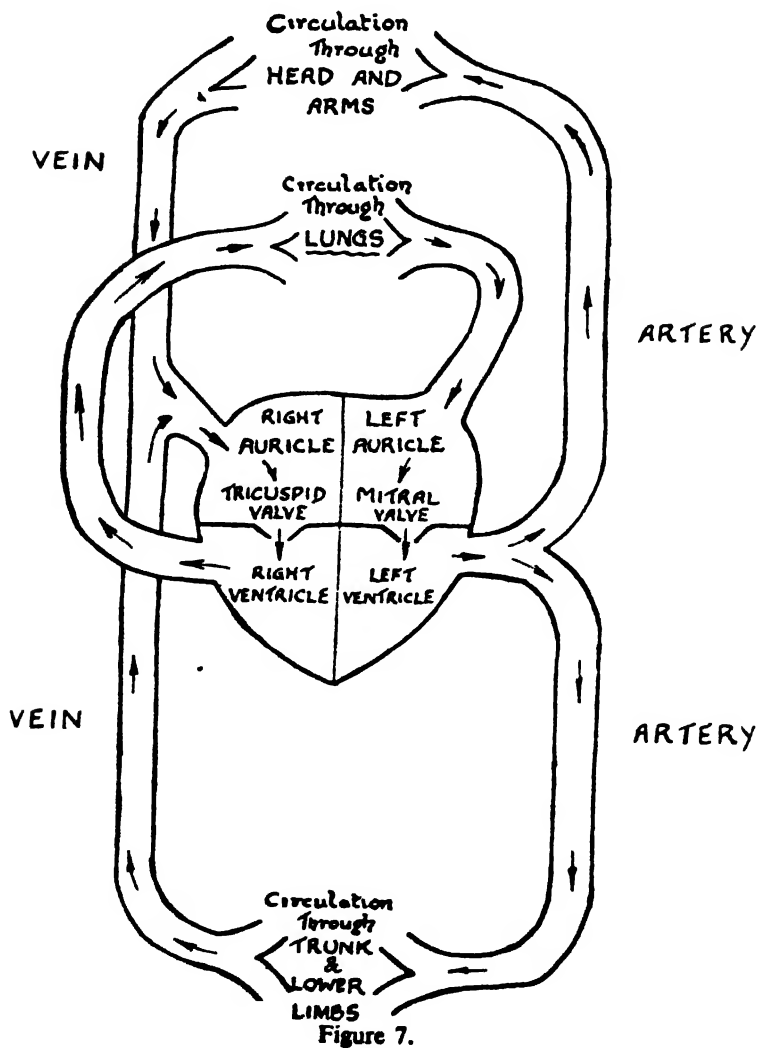
Headache.

Headaches are an extremely common complaint under modern conditions of living. Most of them have a fairly simple explanation, such as worry, excessive drinking, excessive smoking, too little sleep or some minor illness such as a cold. Most of us suffer from an occasional headache from time to time, and this type of headache can usually be relieved by taking two aspirins in a little water. It is when headaches become persistent that more notice must be taken of them, and some under-lying cause sought for. Eyestrain (*see* EYE, INFLAMED) should be considered, particularly when headaches occur regularly towards the end of the day. A headache on rising in the morning may lead to a suspicion of sinusitis (*see* ANTRUM), or may be associated with chronic catarrh. Headaches also accompany some forms of indigestion and are commonly associated with CONSTIPATION. In women ANAEMIA is sometimes a cause, and in both sexes a rising BLOOD PRESSURE may give rise to headaches. In general it can be said that the great majority of headaches are not serious, and are not an indication of any disease of the brain. If, however, headaches occur regularly it is wise to consult a doctor to see if there is any cause which can be put right.

Heart Disease.

The heart is a specially adapted muscle, which pumps the blood continuously round and round the body. The purpose of this circulation of the blood is to carry nourishment to the tissues, to take away waste products from the tissues, and, perhaps most important of all, to distribute oxygen from the outside air throughout the body. Oxygen is a gas which makes up about one fifth of the air we breathe, and it is essential that all living tissues should have a constant supply of oxygen. Air is taken into the lungs where there is a large meshwork of very small blood vessels, and the blood passing through these absorbs the oxygen from the air we breathe in. This blood then returns to the heart whence it is distributed in large blood vessels to the rest of the body. It returns to the heart once more after it has lost its oxygen to the tissues, is pumped through the lungs again to collect more oxygen, returns to the heart—and so is pumped round the body once again. The general plan on which the circulation is based can be seen from the diagram (FIG. 7, page 110). It will be noted that the heart is a four chamber pump; two chambers receiving blood (the auricles), and two chambers pumping it out (the ventricles). It is also seen to be divided into two sides, left and right, each consisting of one auricle and one ventricle.

The heart may be affected by disease in many different ways. The muscle itself may be damaged—sometimes by the poison from germs, a condition known as *toxic myocarditis*. This may follow various infectious illnesses, diphtheria being a good example; but fortunately the damage is nearly always only temporary, and the heart muscle recovers in time. *Rheumatic fever* on the other hand sometimes leaves permanent trouble behind it, the

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heart muscle being scarred and weakened. Sometimes, particularly later in life, the muscle is weakened because too little blood reaches the heart itself. (See ANGINA and CORONARY INFARCT.)

In other cases the rhythm of the heart is disturbed. Normally it beats steadily about 70 to 80 times a minute, but sometimes due to disease the action becomes irregular, and the pumping action, therefore, less efficient.

The passage of blood through the heart is regulated by valves, which allow the blood to pass in one direction only. Sometimes these valves are affected by disease, particularly *Rheumatic fever*, so that they become too narrow, or become inefficient, allowing blood to pass in the wrong direction. One of the most common forms of valvular disease is called *Mitral Stenosis*. This means that the Mitral valve which guards the passage between the left auricle and left ventricle becomes narrowed. (FIG. 7, page 110).

In other cases the heart becomes damaged due to disease of the blood vessels. In *arteriosclerosis* when the arteries become hardened, the heart has to do much more work than normally, so that eventually the muscle may give way under the strain. (See BLOOD PRESSURE.)

Whatever the cause of the condition, the sufferer from heart disease can nearly always continue to derive considerable enjoyment from his life—provided that he manages it properly. He is in the same position as a man who has always owned a 30 horse power car, but who loses his money and has to make do with an Austin 7 or even a bicycle. He cannot expect to get about as quickly and easily as he did before, but he still *can* get about even if it takes him rather longer. The human heart has a great reserve of power, so that even when it is damaged it is still

able to cope with our basic needs. It is also worth remembering, that in spite of the stories of popular novelists, sudden death in heart disease is far from common. In fact it is really quite rare. The sufferer from heart trouble, if he is going to come to a sudden and unexpected end, is far more likely to do so from a road accident or some other cause, than from sudden heart failure.

Heartburn.

The name given to a form of indigestion in which pain is felt in the lower part of the chest, or in the region of the heart. It is often connected with FLATULENCE.

Hemiplegia.

A condition in which one half of the body becomes paralysed. It is due to some disturbance of the brain, and most commonly follows a stroke. (See STROKE).

Hepatitis.

The medical term for inflammation of the liver. The liver may be attacked by germs which reach it either from the blood stream or from the digestive tract. When this happens the bile is sometimes unable to escape from the liver, and so passes back into the blood stream. It colours the tissues of the body yellow. For further details see the article on JAUNDICE.

✓Hernia.

The space within the abdomen, or belly, is taken up by

a number of organs, the most important being the intestines which form a long coiled tube (FIG. 2, page 36). The walls of the abdomen, in front, are made up of layers of muscle, and if a weakness develops one of the coils of intestine may push between the muscle layers and come to lie under the skin. It is known as a hernia—or more popularly as a *rupture*. The most common site for a hernia is in the groin. This is the weakest part of the abdominal wall, particularly in men where there is a small opening through which the cord passes to the testis. If this opening becomes stretched a rupture is very liable to develop. Sometimes ruptures occur in other positions, around the navel or at the site of old operation scars. The best treatment for a rupture is usually an operation. If the hole through which the intestine protrudes can be firmly sewn up, then the rupture will be cured. In many cases it is possible to control a hernia by wearing a truss, which presses on to the rupture site and thus keeps the intestine back. A truss, however, will never cure the condition, which may become worse in spite of it; and in any case it is a great nuisance to have to wear continually. Unless there is any definite reason against it I always advise an operation for rupture. In predisposed subjects a hernia may be caused by undue strain, e.g. lifting heavy weights. We should not abuse our bodies by doing this sort of thing.

Herpes.

A condition in which there is a group of small spots on an area of inflamed skin. The spots are known as vesicles, which means that they have white heads containing fluid. There are two types of herpes. Herpes Zoster is the

medical name for Shingles (*see* SHINGLES); and there is another variety, Herpes Labialis, which develops round the lips—usually during the course of some other illness such as a cold. The spots should be kept dry, and can be dabbed with a little surgical or methylated spirit from time to time and dusted with a little talcum powder. They usually disappear after a few days, and leave no permanent marks.

Hiccough.

Everyone must be familiar with this condition, which can sometimes be most distressing if it refuses to stop. It is usually due to an irritation of the stomach (hence the association with alcoholic drink), which causes a spasmodic, violent contraction of the breathing muscles resulting in the familiar “hic”. There are many popular dodges for curing hiccoughs and one of these will usually work. If an attack develops when the stomach is empty, especially after a drink such as a “cocktail”, one, or better two, glasses of water will often cut it short, and so sometimes will a little food. Holding the breath for as long as possible with reasonable comfort is also quite effective. Two lumps of sugar soaked in vinegar will often bring about a cure, or half a wineglass of vinegar with an equal quantity of water may be taken as an alternative. In some cases pulling on the tongue, or pressing on the eyeballs through the closed lids will bring relief.

Hydrocoele.

The medical term for a collection of fluid around the

testis. When the child is developing, the sex glands, in both sexes, are formed within the abdominal cavity (or belly). In the female these glands, which are the ovaries, remain within the abdomen throughout life; but in the male the testes move downwards, and by the time of birth are outside the body cavity enclosed in a special fold of skin—the scrotum. As it moves down the testis carries with it part of the lining from the inside of the abdominal wall, and sometimes this lining forms a small pouch, as it were, in which fluid can form. This is a hydrocoele. Sometimes the condition can be cleared up by “tapping”, which means that a small needle is inserted to remove the fluid; but at other times this is not sufficient and an operation is required to remove the “pouch” itself.

Hypertension.

The condition : which the blood pressure is raised above normal. See the article on BLOOD PRESSURE.

Hysteria.

Strictly speaking this term refers to a disorder of the mind in which the sufferer becomes so convinced of an imaginary ailment that to him it is quite real. Thus one may have a hysterical paralysis in which the victim is quite unable to move a limb, though there is nothing whatever structurally wrong with it. The term hysteria also has a looser and more popular meaning when it is applied to a condition in which a person loses control of himself—or more often herself. Following some mental shock the patient may fling herself about, go off into uncontrollable laughter or sometimes equally uncontrollable tears. Firm

handling is the only way to restore such a person to her right senses, as often sympathy merely makes matters worse. A bucket of cold water (applied externally) is an excellent treatment but rather messy, and often a few sharp words will produce equally good results.

I

Ichthyosis.

This is the name given to a skin condition in which the whole skin is dry and scaly. The patient is usually born with this abnormality, which sometimes runs in families. It is due to a great reduction in number, or an absence of the normal sweat glands which keep the skin moist. The condition cannot be cured since it is not possible to replace the missing glands, but it can be alleviated by keeping the skin constantly greased—olive oil being one of the best applications for these cases.

Impetigo.

A highly infectious disease of the skin caused by a germ known as the streptococcus. It usually attacks the face, and is most common in children. A small area of the skin becomes itchy and inflamed—often near the corner of the mouth—and following this begins to weep and form yellowish crusts. If not treated the condition tends to spread rapidly, and may cover the entire face. Because of this tendency to spread, suspected cases of impetigo are best taken to a doctor as early as possible. In any case the area affected must be kept dry, and every effort made to prevent the patient from scratching at the scabs, for this is one of the chief factors which spreads the infection. The bed linen, pillows, handkerchiefs and washing materials should be kept strictly separate, since they are very liable to spread the germs, and they should be well boiled before being returned to general use once the condition has cleared up.

Impotence.

This may be defined as an inability to perform the sexual act on the part of the male. In a small number of cases this may be due to some definite disease—the penis or male organ may be deformed (sometimes curable by plastic surgery), or there may be some interference with the nervous control which is responsible for erection. In a large number of cases, however, there is nothing structurally wrong. General debility due to some other disease such as influenza, excessive consumption of alcohol and mental strain and worry may all result in a temporary loss of potency; but the condition will recover when the cause is removed. In many cases the cause is purely psychological. The patient for some reason becomes worried about his ability to perform the act, and the more worried he becomes the less successful he becomes in his efforts. All that is required in these cases is confidence, and once this is realised by the patient the condition will rapidly improve. There are several good cheap books on the subject suitable for the lay reader.

Incontinence.

This term is applied when control over the bladder or the bowels is lost. All young children, as most people will know, are incontinent during the first years of life, but by the age of three at the latest full control should be established. The bladder, in which the urine formed by the kidneys is stored, is guarded by a strong muscle; and normally it is only when we allow this muscle to relax that urine is passed. Incontinence of urine may result from many causes. In both sexes it will occur when the nervous control of the bladder is disturbed. Thus a patient may become incontinent after a **STROKE**, when part of the brain

is damaged, or to quote another example in the condition of **DISSEMINATED SCLEROSIS** when the nerves in the spinal cord are diseased. Local diseases of the bladder or neighbouring parts may also cause incontinence. Thus it may occur in **CYSTITIS**—or in women who have suffered some injury in childbirth. In men, in later life, it is sometimes a symptom of disease of the *prostate gland*.

The same general considerations apply to loss of control over the bowels. The most common cause is a derangement of the nervous control, but local factors may also be responsible sometimes.

Whatever the cause of the condition, it is one that calls for expert treatment; and no one who finds difficulty in controlling these functions should hesitate about consulting a doctor.

Indigestion.

This condition covers a very wide range of symptoms, and is used commonly when there is any upset in the normal digestion. It may be applied to discomfort or actual pain following meals, or to such conditions as heartburn or flatulence. In a strictly medical sense the term has no very precise meaning, and does not refer to any definite disease. For further information the reader should consult the articles on **ACIDOSIS**, **DUODENAL ULCER**, **DYSPEPSIA**, **FLATULENCE** and **GASTRIC ULCER**.

Infantile Paralysis.

This disease, unfortunately, appears to be on the increase in this country in the post-war years. It is caused by a virus (a very small germ) which enters the body and attacks the nervous system. The disease is infectious, and may be

spread either by way of the respiratory system, coughing and sneezing, etc., or via the digestive tract, the germs entering the body in some of the food which is eaten. As the name implies the disease most commonly affects children, but adults, and particularly young adults, are by no means immune; and occasionally the condition develops even in the elderly. The early symptoms of the disease are often rather vague. The patient feels "off colour", and often has some fever. Headache, which may be severe, is common; and it is not infrequently accompanied by some pain in the limbs. In a few cases there may be some sickness. After an interval, usually two or three days, the paralysis develops; and some part of the body, perhaps an arm or a leg is found to be useless. This is caused by the germ destroying the "motor" cells in the spinal cord, which pass the messages on from the brain, which move the part concerned. Usually the paralysis improves a little as the attack wears off, but since the damaged cells cannot be replaced some remaining loss of function is all too common.

There is no specific treatment for this disease, in the same way, for instance, that "M & B" will cure pneumonia. General measures and skilled nursing are required and the patient being infectious should, of course, be isolated. For these reasons the disease should always be treated in hospital. The chief danger to life is that the breathing muscles may become affected, and most people will have read of the "iron lung" which is a machine for carrying out artificial respiration on these cases.

It has been shown by studying a large number of cases that the less exercise that is taken during the early stages the less is the extent of the paralysis which develops later.

During an epidemic, therefore, any child which develops suspicious symptoms or appears " off colour " is best put to bed. The doctor should be called in, and twenty-four hours' observation will usually decide whether an attack is threatened or whether it is only some minor upset from which the child is suffering.

Infection.

Infection occurs when the body is invaded by germs. It may be a local infection, as for instance in the case of a septic finger or a boil; or a generalised infection such as measles. A disease is spoken of as being *infectious* when the germs can be spread indirectly from person to person. Thus "colds" are highly infectious, being spread by coughing and sneezing, or even by ordinary breathing when the air breathed out contains numbers of the "cold" germs which contaminate the general atmosphere. Some diseases can only be spread by direct contact and these are spoken of as being *contagious*. An example is the venereal diseases in which the germs are spread only by sexual contact. In practice a large number of diseases are both infectious and contagious. Thus *impetigo*, for instance, may be spread by direct contact of one child with another, or the germs may escape into the air from the drying crusts which form on the skin, and thus infect others indirectly.

Inflammation.

This word has been used a good deal throughout this book, so that the reader should be given some explanation of its meaning. Briefly it may be defined as the reaction of any tissue of the body to injury—provided that the

injury is not sufficient to kill the part concerned. A dead tissue cannot become inflamed. From the body's point of view it does not matter much what form the injury takes. It may be excessive heat—a burn, or excessive cold—frostbite, or injury produced by germs—an infection. Whatever the cause, inflammation will follow. The injured part becomes swollen; it becomes red because the small blood vessels are widely opened; it becomes hot to the touch for the same reason, and is usually painful because the small nerve endings are irritated. All these changes must be familiar to most people—a good example is a boil in the skin which shows all the characteristic features of inflammation, being swollen, red, hot, and also painful.

Influenza.

This is an acute generalised infection, which usually occurs in epidemics during the winter months. It is caused by a virus, or to be more precise there are several different types of influenza each caused by a particular virus. The differences between the types of influenza are very slight, and need not concern us here. The disease usually starts with a raised temperature, and the patient feels generally unwell, hot and feverish. There may be some shivering during the early stages, and often there is a headache and some running at the eyes and nose. As the attack progresses, aching in the bones and joints is a common complaint. In some cases sickness may be a feature of the infection, and in this case it is often spoken of as “gastric ‘flu’”. The disease is not usually serious, though there have been some severe epidemics such as that which followed the 1914–18 War. The temperature settles down, usually within a week, and the patient

gradually returns to normal health. Influenza is chiefly dangerous because it lowers the body's powers of defence, and may therefore be followed by more serious complications such as pneumonia. For this reason it is not a condition which you can afford to neglect, and the patient should always remain in bed until the temperature has returned to normal. Mental depression is common following influenza, and a short holiday, especially after a severe attack, is always to be recommended.

Ingrowing Toe Nail.

This is a common and annoying complaint. It is due not so much to a fault on the part of the nail but more to an abnormality on the part of the surrounding skin. This becomes raised, particularly at the edge of the nail, so that the toe nail instead of growing over it in the normal way grows *into* it thus causing pain. It is most commonly due to the wearing of tight and cramping shoes, particularly in childhood, and since the toes are squeezed together the skin around the nails is forced up. To prevent the condition care should be given to the fitting of the shoes especially in the young (*see also* HAMMER TOE), and anyone who suffers from this complaint should be particularly careful to wear broad-fitting shoes. The offending nail should be kept carefully trimmed, so that it is not allowed to grow into the overhanging skin, and the services of a chiropodist (*see* CORNS) are often very worth while. For severe and neglected cases it is sometimes necessary to have a small operation to put matters right.

Insanity.

This term covers a wide variety of mental derangements

which result in the patient being unable to conduct his affairs normally and reasonably, and often in his becoming a danger to himself and others. It is difficult, very often, to draw a firm distinction between behaviour which is rather out of the ordinary and behaviour which is a symptom of insanity, but one of the best guides is the patient's *insight* into his own actions. Thus we all behave a little queerly at times; we have moments when we behave unreasonably over trifles, or "fly off the handle" for no real cause. But when we think about it we know quite well what we have been doing. The insane person on the other hand behaves unreasonably, but does not know it. To him his actions appear to be quite normal. Insanity can take a large number of different forms. There may be intense depression, or, on the other hand, constant wild excitement; the patient may imagine things and thus suffer from *Hallucinations* or delusions (see HALLUCINATION). In other cases there may simply be mental weakness, so that an adult thinks and behaves like a small child. The outlook in many forms of mental disease is now very much better than it was even twenty years ago. New forms of treatment are constantly being devised, which include such measures as operations on the brain itself, or the application of strong electric currents to the head which often brings about great improvement in cases of depression.

Insomnia.

Sleeplessness. An inability to sleep is a distressing and exhausting condition. It affects women rather more often than men, and becomes more common with advancing years. Those who are troubled with this complaint should

read the paragraph on sleep in the opening chapter of this book (page 15), but if the advice given there does not result in any improvement a doctor should be consulted. Often quite simple remedies are effective, and a harmless sleeping draught for a short while may re-establish the habit of normal sleep so that the insomnia remains cured even after the draught is discontinued.

Insulin.

A secretion from the pancreas which is poured into the blood stream and controls the rate at which the body burns up sugar and starchy food. See the article on DIABETES.

Intussusception.

A condition in which one part of the intestine telescopes into another. It sometimes occurs in young children, who then suffer from severe colic, accompanied by screaming and drawing up of the knees. Often there is sickness as well, and in some cases a little dark red blood is passed from the bowels. The condition calls for urgent treatment, and an operation is usually required.

Itch.

Itching is caused by mild irritation of the skin, and is a common symptom of many skin diseases. Scratching cures an itch temporarily by swamping the messages which travel up the nerves by more powerful ones; but in the long run it often makes the itch worse by increasing the irritation. For a mild itchiness of the skin calamine

lotion is often effective. The condition known popularly as "the itch" is caused by a small animal which burrows into the skin. (See SCABIES.)

J

Jaundice.

One of the functions of the liver is to make bile, which is a dark yellowish liquid which is stored beneath the liver in a little sac known as the gall bladder. It is then poured into the intestine where it helps with the digestion of fats. If for any reason the bile cannot escape into the bowel it is forced back into the liver and enters the blood stream. The tissues of the body, including the skin, then become coloured yellow by the bile. This is the condition of *jaundice*. It may be due to several causes. The liver may be attacked by germs when the inflammation causes a blockage of the small ducts which carry the bile to the gall bladder (*see HEPATITIS*). Sometimes stones develop in the gall bladder itself, and one of these may come to block the small duct which takes the bile from the gall bladder to the intestine. In other cases enlarged glands press upon the duct and cause a blockage. In young people *hepatitis* caused by a virus is the most common cause. The patient should be kept in bed until the jaundice fades, and should be given plenty of fluids to drink. The diet should be light, and should contain as little fat as possible, since this cannot be digested properly without the presence of bile in the intestine. The condition usually clears up in two or three weeks without leaving any ill effects.

K

Kidney Diseases.

The kidneys are two organs which lie at the back of the abdominal cavity in the loins. Their function is to filter the blood which is continually passing through them, and to remove the waste products which are then disposed of in the urine. In children and young adults, and sometimes in older people, the kidneys may be the seat of an inflammation, a condition known as *nephritis*. The cause of this is not precisely known, but it is probably due to a toxin (the poison produced by a germ), and the condition may follow scarlet fever, or a sore throat. The patient may develop some pain in the loins, and the urine is often coloured a dark red due to the presence of blood. There may also be some swelling beneath the eyes and the lower parts of the body due to water in the tissues (*see DROPSY*). Considerable care is needed in treating this disease, and if any suspicious symptoms develop a doctor should be called without delay.

Sometimes stones develop within the kidney, and these may lead to an infection in the kidney itself—the condition of *pyelitis*. In this there is usually a high temperature, pain in the loins, and great frequency in passing water. Sometimes a small stone escapes from the kidney and causes pain and bleeding as it passes down the duct (or ureter) from the kidney to the bladder.

The condition of *floating kidney* used at one time to be a popular diagnosis, but we now know that the symptoms were usually due to other causes. Occasionally a kidney becomes rather loose on its moorings, so to speak, and causes trouble, but the condition is very rare.

Knock-Knee.

A condition in which the bones of the legs become deformed. Normally it is quite easy to stand with both knees and both ankles touching each other; but in knock-knee, when the knees are touching, the ankles are separated. The condition is nearly always due to softening of the bones in childhood caused by a deficiency of calcium (*see* RICKETS). In mild cases it may be cured by manipulation, but in longer standing and more severe cases an operation may be necessary to straighten the bones.

L

Labia.

This word is derived from the Latin, and literally translated means lips. It is the name for the double folds of skin which form part of the external female organs. There are two labia, an inner and outer on each side of the mid-line, and the inner one contains a number of small glands whose function is to lubricate the part during the sexual act. These glands are known as *Bartholin's glands*, and it sometimes happens that they are invaded by germs, when an abscess, known as a *Bartholin's abscess* forms. This causes a painful swelling of the external parts, and it is usually necessary to "lance" this and release the pus or matter before the condition will subside.

Labour (see also BIRTH).

The process of birth. Labour is divided into three stages. The first stage consists in a dilatation of the exit from the womb, when the regular contraction or "pains" gradually enlarge the opening until it is large enough for the baby to pass through. The second stage is the gradual descent of the baby from the womb through the female passage (or vagina) until it finally leaves the mother's body. The patient should be under the care of a doctor or midwife, but in the normal birth it is well to remember that the less afraid the woman is, the less will be her pain. In the third stage the womb contracts or shrinks in size and finally expels the placenta, or after-birth, which is a large mass of tissue attached to the inside of the womb from which the baby draws its nourishment from the mother.

For further details and for advice on the management of labour by a lay person, see the article on BIRTH.

Laryngitis.

The larynx, or voice box, lies in the neck at the top of the windpipe, and just below the throat. It is liable to become inflamed during any infection of the respiratory (breathing) organs, and laryngitis may follow or accompany such conditions as a "cold" or bronchitis. It often starts with a tickling sensation low down in the throat which leads to a hard cough, which later becomes painful. If the attack is a severe one the larynx cannot function properly so that the voice may be temporarily lost—the patient being unable to speak above a whisper. The condition usually clears up within about a week, and can be relieved by inhaling steam to which soothing medicaments have been added. An old but good treatment is for a teaspoonful of "Friars Balsam" to be added to a pint of boiling water in a jug. The patient then covers the head with a towel, and with his mouth over the jug inhales the vapour for about ten minutes several times a day.

Leucorrhoea.

This is the name given to a whitish discharge from the vagina—or female passage. There are a number of causes of the condition. In some women there is normally some discharge at the time of puberty, when the sexual functions are becoming established, for a few days before each "period", and often during pregnancy. In other cases the discharge may be due to a small parasite known as the *Trichomonas* which invades the vagina, or sometimes may be due to infection by germs. *Gonorrhoea* is also a

cause of vaginal discharge. Apart from the "period" and the conditions mentioned above in which a *slight* discharge is normal, a vaginal discharge is always an indication that something is wrong, and no woman should neglect to seek advice because of a feeling of modesty or any other reason. Your doctor is quite used to dealing with such matters, and it is much better to have the condition put right in the early stages than to delay until treatment becomes much more difficult.

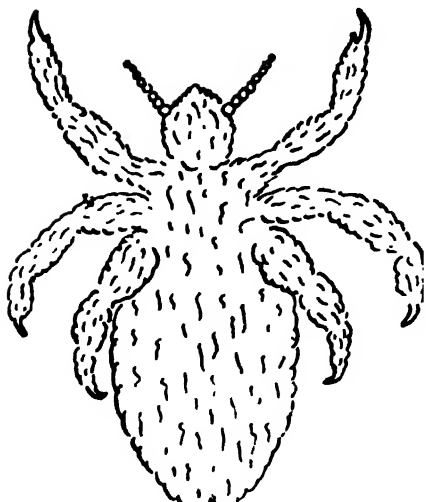
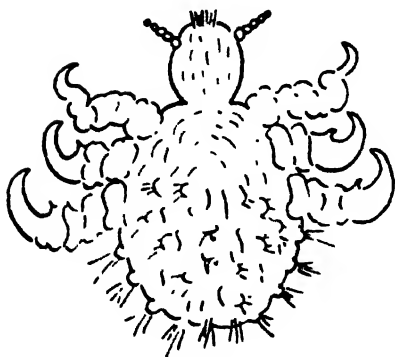
Leukaemia.

This is the name given to a blood disease in which the white cells, or corpuscles, in the blood increase tremendously in number. The function of these white cells is chiefly to deal with invading germs, and their number is normally relatively low when compared with the red cells. The condition of *Leukaemia* may be regarded as a form of cancer in which the white cells continue to multiply indiscriminately.

Lice.

These are small animal parasites, about the size of a match head, which live on the human body. They usually inhabit the hairy regions, cementing their eggs, or nits, to a hair after they are laid. There are three distinct families of lice. The head louse, the body louse, and the pubic louse which live in the hairs around the genital organs. *Pediculosis* is the medical term for infestation by lice, and the condition is contagious, being spread by contact from one person to another. It is encouraged by lack of personal cleanliness, so that lice always flourish when washing becomes difficult, as for instance in soldiers on active service. The louse feeds on blood from its

LICE (Magnified about 10 times).

1. *The Body Louse.*2. *The Pubic Louse.*

Often known as the "crab" louse.

3. *A Nit.*

Showing attachment to a hair.

Figure 8.

human host, and the bites cause considerable irritation. The scratching which follows is very liable to introduce germs into the tissues, so that infected spots and small boils develop in the skin. The other unpleasant consequence of pediculosis is the spreading of a disease known as *Typhus*. This is a serious illness caused by a small germ which, apart from attacking a man, can also live in the body of the louse. Infected lice may spread from person to person, carrying the disease with them. The treatment of pediculosis used to be rather difficult, since the nits are cemented very firmly to the hairs, and even if all the lice are destroyed new ones are liable to hatch out later. During the last war a new chemical was discovered, known for short as D.D.T., and this is extremely poisonous to all forms of insects. It is now only necessary to dust the body with D.D.T. powder to destroy all the lice, and, since the powder remains effective for some time, the baby lice will also be destroyed as they emerge from the eggs.

Lipoma.

This is the name given to a fatty tumour. The body is normally covered by a layer of fat beneath the skin, and it sometimes happens that instead of being distributed evenly the fat in one place forms into a small tumour—or lump—about the size of an egg. This forms a soft, painless bump beneath the skin. The tumours are quite harmless, but sometimes look unsightly, in which case they can easily be removed by a small operation.

Liver.

The liver is a large organ which lies in the upper part of the right side of the abdominal cavity (see FIG. 2, page 36). It serves a number of important functions. All

the blood from the digestive tract passes through the liver before it returns to the general circulation, and a lot of the nourishment from the food is altered by the liver to make it suitable for the body to use. Some of the food, particularly sugar, is also stored up in the liver so that it can be used later if the body requires it. The liver also removes worn-out blood corpuscles from the circulation and uses the red pigment (haemoglobin) from the red blood cells in the manufacture of bile. This bile is stored in the gall bladder beneath the liver, and is then poured into the intestine where it helps in the digestion of fats. Inflammation of the liver is known as hepatitis (*see* HEPATITIS), and sometimes the liver cells degenerate so that the liver can no longer carry out its functions properly—a condition known as *cirrhosis of the liver*.

Lobar Pneumonia.

A variety of pneumonia in which a complete segment—or lobe—of the lung is involved. *See* PNEUMONIA.

Lumbago.

A condition in which the lumbar muscles, in the back on either side of the spine, become attacked by a muscular rheumatism. An attack of lumbago may be brought on by unaccustomed exercise, or sometimes follows some other illness such as influenza. *See* also the article on BACKACHE.

Lupus.

This is a skin disease in which the tubercle bacillus (germ which causes tuberculosis) invades the skin and causes a chronic slowly spreading inflammation. The disease usually affects the face, often starting on the skin of the nose and spreading to the cheeks on either side. The

skin becomes reddened and contains areas of thin, brownish, papery-looking scars. The condition is difficult to cure, and treatment takes a long time. As with all tuberculous infections the general health must be kept at a high level, and local treatment must be applied to the area affected at regular intervals. In recent years a new form of treatment with high doses of vitamin D has produced most encouraging results.

Lymphadenoma.

A disease of the lymphatic system, and lymphatic glands (*see* GLANDS). The cause is not definitely known, but the condition closely resembles cancer. There is a slow but steady increase in size of the lymph glands throughout the body which may reach the size of an egg. The disease can often be benefited by the use of X-rays.

M

M and B.

This is the popular name often given to a group of drugs now known as the *sulphonamides*. One of the earliest of the drugs was made by the firm of May and Baker, and was named M & B 693. These drugs represent a great advance in our fight against disease. It is extremely easy to destroy germs, but the trouble is that chemicals which will destroy them will also injure the tissues of the body. Thus, once germs have gained a foothold it is difficult to get rid of them without damaging the part of the body which they have invaded. The sulphonamide drugs are effective against quite a number of germs causing common diseases, one of the best known being pneumonia. They do not kill the germs outright, but they prevent them from breeding, which allows the body's normal defence force to shut them off and to get rid of them very quickly. The sulphonamides do not harm the tissues in which the germs are lying, so that they are safe to use.

Mania.

A form of insanity in which there is wild and uncontrollable excitement. A maniac is a danger to himself and others, and should always be put under restraint as soon as possible. Any person who becomes noisy, violent and unreasonable should be treated with the greatest circumspection. He is better not left alone, or in the company of only one person whom he may injure. Several people should stay with him and be prepared to restrain him forcibly if need be while medical aid is summoned urgently.

While force may be necessary, it should be avoided if possible, and often the patient can be restrained from violence by distracting his attention with something else.

Marasmus.

This term is applied to new-born babies who fail to thrive. Normally a baby loses a little weight during the first week of life, but after that should gain steadily. The birth weight should be doubled at the end of the first six months, and trebled at the end of a year. If a baby ceases to gain weight, or starts to lose, then something is wrong, and no time should be wasted in finding out what. The food, if it is artificially fed, may be unsuitable; or, with either artificial or breast feeding, may be insufficient. There may be some developmental abnormality which interferes with normal growth, or there may be some infection, perhaps in the ears or in the digestive tract itself, which is holding the baby back. A careful watch must be kept by the mother on all young babies, and a regular weekly weighing is an excellent check on progress. If there is any indication that the baby is losing ground then medical advice should be sought without delay. Time is often vital in these cases.

Mastitis.

The medical term for inflammation of the breast. *See* the article on **BREAST**.

Mastoid.

The mastoid process is a projection from the bones of the skull which lies just behind the ear. (*See* FIG 9, page 156). In common with several other skull bones it is hollow (*see* **ANTRUM**), and contains a number of small

spaces filled with air. These spaces communicate with the inside of the ear, so that if there is an infection of the ear the mastoid is liable to become involved. When this happens the condition is known as *mastoiditis*. The pus or matter from the infection is surrounded by bone and cannot easily escape. It may, if left, work its way inwards instead of outwards until eventually it escapes within the skull and causes a brain abscess. Mastoiditis is usually accompanied by some discharge from the ear, and the bone behind the ear becomes tender and painful. There is often a high temperature, and there may be a severe headache. The condition is most common in children, and if there are any suggestive symptoms no time should be lost in consulting the doctor. Sometimes with the aid of modern drugs such as penicillin or the sulphonamides (M & B) the inflammation can be made to subside, but often an operation is necessary to allow the pus to escape, and to prevent the occurrence of dangerous complications.

Masturbation.

This can be defined as the solitary gratification of the sexual urge. In both sexes there is a strong instinct towards sexual union, but under modern conditions of civilisation this must often be repressed. Marriage offers the only respectable outlet for the sexual drive, but for economic and other reasons marriage is rare before the early twenties, and many people go through life and remain single. In these cases the sexual urge must either be repressed completely, which is difficult and often leads to an inner mental conflict, or it can be gratified by promiscuous unions or by self relief. The latter, especially

among the younger members of both sexes, is a common practice, and in a broad view is probably preferable to promiscuity with its ever-present risks of illegitimate pregnancy or venereal disease. It used to be widely held that masturbation would produce serious consequences on the general health, and could even lead to insanity. These stories were probably put about to act as a deterrent, and there appears to be no evidence that masturbation in itself is harmful, provided, like normal sexual indulgence, it is not carried to excess. This does not mean that the habit can be regarded as a pleasant one, but for those who are unable to solve their sexual problems by marriage, and who are not capable of complete abstinence it does offer an alternative to promiscuity which is normally harmless.

Measles.

An acute infection of childhood caused by a specific germ which is one of the virus family. The disease usually occurs in epidemics and most commonly affects children of school age, though older people who have escaped the infection in childhood may develop it later. A second attack in the same person is very uncommon. The disease is infectious (*see* INFECTION) and may also be spread by "carriers" who harbour the germ without developing the actual disease. The incubation period, which is the interval between "catching" the germ and developing the disease, is usually about ten days. To start with the symptoms resemble a severe "cold" and usually come on suddenly with shivering, headache, running at the eyes and nose and sometimes a little sickness. The temperature rises gradually until the rash develops. This is usually on the fourth day of the disease; though before the spots

develop on the skin they can be seen, very often, on the inside of the cheeks, where they appear as small red spots with a bluish-white centre. The rash proper starts as small, red, slightly raised spots which soon run together, giving the skin a typical blotchy appearance. The spots appear first behind the ears, then on the face, and later spread over the body. After about three days the rash usually begins to fade, the temperature settles, and the patient begins to recover.

Particular care should always be taken with a case of measles, since the disease lowers the body's general resistance, and is very liable to be followed by complications. These include inflammation of the ears, bronchitis and pneumonia. The eyes are also liable to become inflamed, and if this happens reading and writing should not be allowed. The patient may be given a full diet once the appetite returns, and is usually kept in bed for about a week after the temperature has returned to normal—provided there are no complications. For severe cases,† or very young children, serum treatment is often effective in reducing the severity of the attack. In all cases a doctor should be called.

Melaena.

When blood escapes into the upper part of the digestive tract it becomes altered by the digestive juices, and is changed from its normal red colour into a black, tarry, semi-solid mass. The passage of this altered blood from the bowels is known as *melaena*. There are a number of causes of this condition. Bleeding from a gastric or duodenal ulcer may pass down the intestines instead of being brought up (see HAEMATEMESIS), or other conditions

within the bowel may result in a blood vessel being opened. Whatever the cause, melaena is always an indication that serious mischief is afoot, and medical advice will always be needed in treating the condition.

Meningitis.

The meninges are made up of three layers of thin membrane which provide a covering for the delicate nervous tissue in the brain and spinal cord. *Meningitis* is an inflammation of the meninges. It may be caused by several kinds of germs which attack the nervous system, and one in particular, called the meningococcus, is responsible for epidemics of meningitis—sometimes called *cerebro-spinal fever*. This type of meningitis is infectious and usually affects young adults, especially those living in communities, such as soldiers. The onset of the disease is sudden, and the most prominent symptom is very severe headache with stiffness of the neck. There is always some fever, and in some cases there is vomiting. A number of patients develop small red spots on the skin, so that the disease is also known as *Spotted Fever*. The death rate from this form of meningitis has been greatly reduced since the discovery of the M. & B drugs.

Another form of meningitis is caused by infection with the tubercle bacillus (the germ of tuberculosis). This nearly always affects babies or young children, and until recently was invariably fatal. The discovery of a new drug "Streptomycin" which is similar to penicillin but effective against the tubercle bacillus has now improved the outlook a little in this disease.

These are the most common forms of meningitis, but a number of other germs may also attack the meninges, so

that other forms of the disease can occur. Meningitis is serious and should always be treated in hospital.

Menopause.

Sometime between the ages of 40 and 50 a woman normally becomes incapable of bearing children. Sometimes the monthly "periods" cease suddenly, but at other times they become more scanty or irregular before they finally stop. A large number of important functions within the body are controlled by glands which pour various chemical substances into the blood stream. These glands are under the control of a "master" gland called the pituitary which is very closely connected with the brain. At the time of the menopause the female sex glands, or ovaries, cease to function, and this often upsets the delicate balance between the pituitary and the other glands, so that it takes some time for the body to settle down to its normal work again. Various unpleasant symptoms may result from this glandular upset. Hot flushes (*see* FLUSHING) are often troublesome, and minor mental upsets are common during the period of change. There is usually, also, some increase in weight at this time, and in some women this may be excessive. The unpleasant effects of the menopause can often be reduced by giving glandular extracts until the body has readjusted itself.

Menorrhagia.

This is the medical term for excessive loss at the time of the monthly "period" in women—often known as flooding. Even in normal circumstances the extent of the loss during a "period" varies, but the normal duration

should not exceed 6 days (usually 3 to 5), and there should not be more loss than will *soak* three towels a day. There should also be no clots. Menorrhagia is a sign that there is something wrong within the womb. It may be due to small tumours which sometimes grow from the muscle (*see* FIBROIDS) or sometimes it is a symptom of irritation or infection of the womb. It also occurs with some diseases of the blood—certain varieties of anaemia for instance. In some cases the “periods” are very heavy at the time of their commencement at puberty, but in these cases the condition usually settles down to normal in the course of a few months. If it is allowed to continue over a number of months, menorrhagia may sometimes lead to a quite serious loss of blood, and for this reason alone medical advice should always be sought if the loss is excessive. Most women know very accurately what their normal loss should be, and if this suddenly (or even slowly) increases they should consult their doctor to find out why.

Menstruation.

A monthly discharge of blood-stained fluid from the womb—known also as the “period” and referred to popularly as the “curse”. The lining membrane of the womb undergoes a continuous cycle of changes. It is gradually built up, and becomes thickened so as to be ready to receive a fertilised ovum, but if conception does not take place this thickened membrane breaks up and disintegrates leading to the blood-stained loss. Usually a cycle takes about 28 days, so that the periods should occur regularly at this interval. In some women they are painless, but there is normally a little discomfort and some backache, especially at the start. Sometimes

considerable pain is felt, a condition known as *dysmenorrhoea*, and this calls for medical advice. In unmarried women a "sanitary towel" is usually worn to absorb the discharge, but for those who are married an internal tampon such as "Tampax" is often preferred. If conception occurs the membrane does not break up, and therefore the periods stop.

Migraine.

This is a condition in which the patient suffers from recurrent severe headaches. The disease often runs in families, and tends to affect the more intelligent members of the community. The attacks vary considerably in frequency, from three or four per year to once a month or even once every two or three weeks. The actual cause of the attack is not known, but it is probably due to a temporary upset in the blood supply to the brain. The eyes are sometimes affected at the beginning of an attack, so that the patient sees flashes of light or coloured shapes, and following this there is a severe headache, often confined to one half of the head and face. Vomiting not infrequently occurs at the height of an attack, which usually lasts for from 24 to 48 hours. Treatment of the attacks is not easy. The patient is usually best in bed, and if the eyes are sensitive to light, which they often are, the room should be darkened. There are various drugs which may benefit the sufferer, and are certainly worth a trial, but as these require a doctor's prescription, the patient will need medical advice for this disease.

Miscarriage.

A premature birth occurring after the 28th week of

pregnancy, which is the earliest time at which the baby is capable of living outside the mother's body. The reader should consult the articles on ABORTION and BIRTH.

Mumps.

This is one of the acute infectious illnesses of childhood, caused by a small germ, or virus, which affects the salivary glands. These glands produce the saliva, or spit, and are situated in the neck, two just beneath each ear and two under the chin an inch or so from the midline on either side. The glands most often affected are those beneath the ears, and pain in this region, particularly on chewing, is often the first symptom. There is usually some fever, and after a day or two the glands become noticeably swollen. Both sides may be affected together, or often one side swells up first to be followed by the other a day or so later. The incubation period of the infection—the interval between contact and the disease developing—is usually about three weeks but may be as long as four. The swelling lasts from one to three weeks, and the patient should be kept apart from others—especially children—until one week after the swelling has completely gone down. *He should be kept in bed until the temperature has settled*, and is best given a very soft diet during the early stages since chewing is often very painful. Hot poultices to the glands may relieve the pain, and antiseptic mouthwashes are usually prescribed. Occasionally other glands are affected during an attack of mumps, including the sex glands. In males particularly the testes may become swollen, a condition known as *orchitis*, and *a watch should be kept for this complication*, which will call for a further period of rest in bed. It is for this reason, especially, that it is unwise to allow a child to be up and about with mumps, for

complications of this type are far less common if the patient is properly rested during the acute stage of the attack. In all cases the doctor must be called.

Muscular Rheumatism.

This name is often given to a condition in which small painful lumps appear in various muscles which cause pain and stiffness on movement. The small lumps, which can sometimes be felt with the fingers, are really small patches of inflammation within the muscle. Why they occur is not precisely known, but the condition may follow exposure to cold—sitting in a draught for instance—or sometimes accompanies rheumatism of the joints. It most commonly affects the muscles of the neck and shoulders, and also the muscles in the back (see BACKACHE and LUMBAGO). The disease is frequently known as *fibrositis* or may be called *myositis*, which means inflammation of a muscle. The attack usually subsides in a matter of a few days, and recovery may be hastened by rubbing the affected parts with liniment two or three times daily, exerting firm pressure with the fingers over the tender areas.

Myasthenia Gravis.

This is the name given to a rather uncommon disease, in which the messages from the brain to various muscles are not properly passed on, so that the muscles affected become very weak. The face is often involved, so that the eyelids droop and the patient is not able to laugh or smile. The cause of the condition is a fault in a complex chemical substance which is formed in the muscles when messages reach them, and causes the muscles to move. Modern treatment can often supply this chemical in the form of a medicine, which results in a great improvement in the

condition; and in other cases a cure can sometimes be brought about by an operation on a gland in the chest called the *thymus* which is not working properly in this disease.

Myocarditis.

Inflammation of the heart muscle. This may occur during the course of a number of diseases such as diphtheria, and very often accompanies an attack of *rheumatic fever*. The reader should consult the articles on HEART DISEASE and RHEUMATIC FEVER.

Myxoedema.

A condition which follows a disorder of the thyroid gland, in which there is insufficient secretion of thyroxin. The whole body becomes sluggish, and there is considerable increase in fat. The hair becomes coarse, the mental processes slow and the skin dry and scaly. The condition can be cured by giving extract of thyroid gland in the form of tablets. (*See also* GOITRE.)

N

Nails.

The nails are really specially adapted pieces of skin which become hardened and grow out from the ends of the fingers and toes. They are often affected by the general health, and after a serious illness ridges may appear, which gradually grow out as health is regained. Brittle nails may be a symptom of ill health. Sometimes they occur in *anaemia*, and sometimes they may be due to a shortage of calcium, when the condition may be cured by taking calcium tablets. Nail biting is often a distressing habit in children. It may be due to some mental conflict in the child, and is usually most marked when the child is angry or upset. Scolding usually has little effect since the habit is mostly unconscious, and in any case punishment only serves to upset the child further so that nail biting becomes more and not less pronounced. The nails should be kept short so that there is little encouragement to bite them, and the child should be given some definite incentive to stop the habit. Bribery is far more often effective than threats, and may be used in the form of a penny at the end of each week for every nail which is not bitten down, and a promise of some special gift or outing when all the nails have remained unbitten for a month. Whatever is done it is best not to make too much of an issue of the matter, and in any case the habit is nearly always one which the child grows out of.

Nephritis.

The medical term for inflammation of the kidneys.

It may occur as an acute condition (*see* ACUTE) when recovery is often complete, but in some cases the disease becomes chronic and lowers the general health considerably. The reader should consult the article on KIDNEY DISEASES.

Nettlerash.

This is one of the allergic diseases (*see* ALLERGY). It is due to irritation of the skin by some foreign substance—often something in the diet—but sometimes something from outside such as pollen (*see* HAY FEVER) which in some people irritates the skin as well as the nose and eyes. The condition is known medically as *urticaria* and consists in the development of red weals on the skin which irritate, and which have white tops. One of the most common causes of urticaria is eating fish, and sometimes, especially in children, eggs may also cause the condition. The rash does not usually last long, and the best treatment is to avoid the substance which causes the attack. Calamine lotion will often help the irritation during the height of the attack, and some of the newer drugs such as “benadryl” (described under HAY FEVER) may cut it short.

Neuritis.

Strictly speaking this term means inflammation of a nerve, which is not a very common condition. It may occur sometimes when a nerve passes through an area of the body which is the seat of an inflammation, and certain metallic poisons such as lead, which may contaminate drinking water, are capable of setting up a neuritis. There are really two sorts of nerves—those which carry sensations (pain, touch, etc.) back to the brain, and those which

carry messages from the brain to move the muscles. In neuritis, both these functions may be disturbed, so that the muscles in the affected part become weak, and sensations become disturbed resulting in pain, numbness or sometimes "pins and needles". The condition of neuritis is often confused with *neuralgia* which is the occurrence of pain in the area served by a particular nerve. The condition is often due to an "overflow", so to speak, from a small painful focus. Thus a diseased tooth may set up a neuralgia of the whole face. The pain from neuralgia can often be lessened by such remedies as aspirins, but it is always wisest to take medical advice for this complaint, as often there is some underlying cause which must be put right before the trouble will settle completely.

Night Blindness.

An inability to see in the dark. The sensitive part at the back of the eye (the retina) has two different components—one for vision during the day, including colour vision, and the other for vision at night, where there is no appreciation of colour but only of shade and shape. The efficient working of that part which enables us to see at night depends upon a good supply of Vitamin A (*see* page 13) and if this is lacking in the diet the condition of night blindness may result.

Night Sweats.

Excessive sweating at night is usually a sign that there is a raised temperature (*see* FEVER). In normal health the temperature is higher at night than in the morning, though it does not rise above normal. If there is any tendency to fever it is most likely therefore to occur at night, and will often result in sweating. Recurrent night sweats may

occur in any chronic infection, but the most likely cause is tuberculosis, and for this reason the condition should never be neglected. Tuberculosis is most amenable to treatment in the early stages so that any warning signs of this disease should lead at once to a thorough medical overhaul. (*See also* TUBERCULOSIS.)

Nit.

The name given to the egg of the louse. Nits appear as small white specks, just visible to the eye, firmly cemented to a hair. *See* the article on LICE.

Nystagmus.

This is the name given to a condition in which there is a rapid to and fro movement of the eyeballs. The condition can be seen in normal persons who have been spun round until they become giddy, but it passes off in less than a minute. Sometimes, in disease of the brain, or in people who have worked for a long time in poor light, such as coal miners, the control of the eye movements becomes disturbed so that nystagmus occurs all the time.

O

Obesity.

Excessive weight is not only unsightly, but is also detrimental to the general health as it imposes an unnecessary burden on the whole body. In a few cases, especially when it occurs early in life, the condition may be due to a definite glandular disorder; and the increase in weight which often accompanies the "change of life" in women is due in part to the same cause (see **MENOPAUSE**). In the majority of cases, however, the cause boils down to a question of simple mathematics. Too much fat-producing food is eaten; too little exercise is taken to burn it up, and therefore the fat accumulates. In spite of various treatments which are advertised, there is no safe and easy road to weight reduction. The key to treatment is to restrict the intake of fat-producing foods so that no more fat is stored, and what has become stored is burnt up and used by the body. The chief offenders in the diet are the sugary and starchy foods which become converted to fat in the body if not used up. Sugar, sweets, bread, potatoes, jams and pastry must be reduced to a minimum by anyone wishing to lose weight. Lean meat, fish, green vegetables and fruit may be eaten *ad lib*, butter, margarine and milk should be restricted, and cheese and eggs may be taken in moderation. A straightforward regime without fads may therefore be summarised as follows. Give up all sugar (saccharine may be taken in tea or coffee), jams, sweets and pastry and do not use more milk in the day than is required in the tea. Cut down potatoes to two a day—not more than medium size. Cut out bread altogether if possible and use biscuits such as "Ryvita"

instead. Eat as much fish as you like, and as much cheese, lean meat and lean bacon as the ration will allow. Fill up on green vegetables, particularly salads in season, and fruits. Do not be tempted to "nibble" between meals. A few further words of advice may be useful. The more exercise that is taken, within reason, the better, as this helps to burn up the fat which has already accumulated. Try therefore to take at least a little exercise, such as a walk, each day. The bowels should be kept well-opened, and a dose of salts, such as Epsom salts, each morning during the period of weight reduction is a help. Finally, beware of thyroid tablets. Many women are in the habit of taking thyroid to reduce their weight, and it is often effective since it increases the speed at which the body works (*see* GOITRE) and thus helps to burn up fat. If used in excess, however, it may be dangerous, especially as thyroid extract greatly increases the work of the heart and may therefore injure it after a time. It is quite all right to take thyroid tablets if they are prescribed by your doctor and if he sees you from time to time to make sure that you are not having too much. It is most unwise to take them without proper supervision.

Oedema.

The accumulation of excessive fluid in the tissues of the body, usually in the dependant parts. *See* the article on DROPSY.

Orchitis.

The medical term for inflammation of the testes, which are the male sex glands. The inflammation usually results from an attack by germs. It may occasionally occur as a complication to mumps, but the most common cause is a

venereal infection, particularly gonorrhoea. The symptoms are pain and swelling in the testes, and if these occur there should be no time lost in calling in a doctor.

Osteomyelitis.

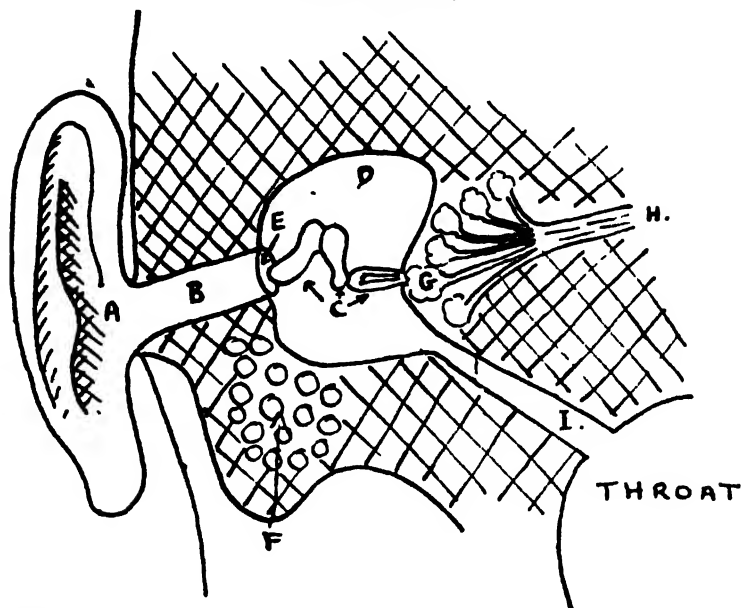
This condition is caused by an infection within a bone. It sometimes happens, particularly in children, that germs from some focus of infection such as a boil gain entry to the blood stream. These germs may lodge in some other organ, and the very narrow blood vessels which nourish the bones may trap some of these circulating germs. The condition most commonly occurs in the region of the knee—towards the ends of the bones above or below the joint, but it can occur in any other bones as well. The infection, which is trapped within the dense bone, causes considerable pain, and there is usually quite a high temperature. Any attempt to move the affected part increases the pain and the child (for children are usually affected) will remain unusually still. Modern treatment with penicillin or the sulphonamide (M & B) drugs will sometimes cause the inflammation to settle, but very often it is necessary to operate and to release the pus or matter which has formed inside the bone. Occasionally the tubercule bacillus is the cause of this condition which is then known as *tuberculous osteomyelitis*. Treatment in this case takes a long time, and it is often necessary to enclose the limb in plaster of paris for many months in order to rest the part completely and allow the inflammation to subside.

Otitis Media.

This term means inflammation of the middle ear. The ear is really divided into three parts (FIG. 9, page 156).

DIAGRAM OF THE EAR

(The Labyrinth, that part of the ear concerned with balance, is not shown).



KEY

- A. The Auricle.
- B. The canal leading to the ear drum. The external auditory meatus
- C. The ossicles—three small bones which conduct the sound from the drum to the inner ear.
- D. The cavity of the middle ear.
- E. The ear drum.
- F. The mastoid process containing air cells.
- G. The cochlea in the inner ear where sounds are analysed.
- H. The auditory nerve conveying the analysed sound impulses to the brain.
- I. The eustachian tube, leading from the middle ear to the throat.

Figure 9.

The outer ear, which we can all see, and which leads down to the ear drum; the middle ear which is a space behind the drum, and which communicates by a narrow tube with the throat, and the inner ear where special structures analyse the sounds we hear. If germs enter the middle ear, which they usually do by way of the narrow tube from the throat, they may set up an infection—or in other words, *an otitis media*. There is nearly always considerable pain in the ear, and very often the ear drum bursts, or perforates, to allow the matter which forms to escape. Unfortunately germs inside the ear are very difficult to get rid of, so that sometimes the condition becomes chronic, and there is a persistent discharge from the affected ear and usually some degree of deafness. In this event the outer part of the ear should be kept clean by gentle swabbing with cotton wool, and your doctor will usually be able to prescribe some drops to lessen the discharge and to encourage the inflammation to subside.

Otorrhoea.

This is the term used for a discharge of matter from the ear. It usually occurs in *otitis media* (see the preceding article) but may occasionally be a symptom of infection in the outer part of the ear.

Ovaries.

These are the female sex glands, which lie inside the abdominal cavity, one on each side just above the womb. They produce the ova, or eggs, which after uniting with a sperm, or male seed, are capable of growing into a baby. One ovum is usually produced every 28 days, about midway between the times of the "periods", and the lining of the womb is increased in thickness to receive it (see MEN-

STRUATION). What controls this timing is not precisely known, but it is usually extremely accurate, though in some women the interval is a little longer and in some a little shorter. The ovaries are sometimes the seat of an inflammation—a condition known as *oophoritis*.



Pain.

Pain is nature's great warning signal. Every part of the body is supplied with a network of fine nerves which carry messages back to the brain, and when these nerves are irritated or injured we feel pain. The pain lets us know that something is wrong, and serves to protect the injured or diseased part from further damage since a painful part is usually moved as little as possible. In cases of injury the body may not even wait for the brain to analyse the message before taking action. We have probably all had the experience of bringing the hand unexpectedly in contact with something hot, like a cigarette end, and feeling the sudden jerk as the hand jumps away almost before the pain is felt. This action is brought about by the spinal cord where the pain signals are "shortcircuited" as it were and are made to move the muscles *before* they actually reach the brain. This is known as a *reflex*, and may occur even when a person is unconscious. Blinking when something approaches the eye is another example of a reflex. Whatever its nature pain is always an indication that something is amiss. It may be only something trivial, and we all suffer from small aches and pains which do not last long. Any severe pain, or any pain which is persistent should not be ignored. See your doctor and get him to treat you.

Pallor.

The normal complexion varies enormously from person to person. Outdoor workers normally have a ruddy

appearance in the skin of the face, while those who work indoors, such as office workers, are usually more pale. Even within each group however there are considerable differences. A pronounced paleness or pallor may indicate a shortage of the red colouring matter (haemoglobin) in the blood, and this is even more likely when the lips and red membrane inside the eyelids are also pale. For further information the reader should consult the article on ANAEMIA.

Palpitation.

Normally the heart beats quietly and steadily and we are quite unaware of its action. Sometimes, however, when the beating becomes more forcible we become aware of it as a thumping or fluttering sensation in the chest. This feeling is called *palpitations*. It occasionally occurs in heart disease when the heart is working more violently than normal, but very much more often palpitations are not due to any serious disorder. They frequently accompany some emotional upset, and in some people are a prelude to fainting. Lay people are often unduly worried when they experience palpitations and feel that something serious has gone wrong. If the feeling persists for any time medical advice should certainly be sought, but in the vast majority of cases there is no cause for any anxiety.

Paralysis.

This may be defined as the loss of voluntary movement of some part of the body—that is a loss of the power to move the muscles concerned. It may be associated with a loss or disorder of sensation, but this is not necessarily the case since the two sets of nerves, motor and sensory,

are separate (*see* under NEURITIS). Paralysis is a symptom of disease or injury to the brain, which controls movements (e.g. a STROKE) to the spinal cord which passes on the messages (e.g. INFANTILE PARALYSIS), or to the nerves themselves (e.g. NEURITIS). Unfortunately, most types of paralysis which have persisted for any length of time do not usually recover completely, because injured nerve cells cannot be replaced. However there is often some remaining function in the part concerned, and by special exercises designed to make full use of this the patient can often do a great deal to overcome the disability.

There is a special type of paralysis which usually affects the elderly known as *paralysis agitans* (shaking paralysis) in which the muscles become stiff and jerk regularly and repeatedly. It is due to a disturbance of that part of the brain which controls the smooth working of movements. Sufferers are greatly handicapped by the stiffness and tremor, but can often be helped by medicines which help to lessen these symptoms.

Parturition.

The medical term for child-birth. *See* the articles on BIRTH and LABOUR.

Penicillin.

The facts in the discovery of this invaluable drug are now known to most people. It was discovered by accident when a fungus, or mould, got into a dish on which bacteria (germs) were being grown. It was noticed that although the germs were still growing elsewhere, they had died on that part of the dish surrounding the mould. A great deal of further investigation resulted in the extraction of a substance from this mould, known as penicillin, which is

capable of killing a large number of germs which cause common diseases. The enormous advantage of penicillin is that it is quite without harm to the tissues of the body (*see under M & B*) and can therefore be used in large doses without fear. Unfortunately it is necessary to give it by injection since it is largely neutralised and made ineffective by the digestive juices. However, methods are already being tried to counteract this effect, and perhaps the time will come when penicillin can be taken by mouth in the form of a medicine. This is already possible in very young babies whose gastric juice is not so strong as that of the adult. Penicillin is not a "cure-all" since only certain types of germs are sensitive to it, but it has a wide field of usefulness and is effective in most skin infections such as boils, pneumonia, some types of meningitis, gonorrhoea, syphilis and many other diseases.

Penis.

This is the male sex organ, containing a narrow canal, the *urethra*, through which urine from the bladder is voided. If this canal becomes inflamed, as for instance in *gonorrhoea*, the condition is known as urethritis. Normally the penis is relaxed, but it contains a special tissue in which are large blood spaces. Under the influence of sexual excitement these spaces become distended with blood which causes the organ to erect and become stiff. At the end of the sexual act, semen, a fluid containing the sperms or male seed, is discharged from the urethra. Sometimes sexual union is made difficult by a deformity of the penis. The opening at the end of the urethra may be misshaped, or sometimes the organ is bent. Modern methods of plastic surgery are usually able to deal with these abnormalities.

Pericarditis.

The heart is surrounded by a delicate membrane which is known as the pericardium. Under some circumstances this may become inflamed and the condition is then known as *pericarditis*. There are many causes for this, and one of the most common is *rheumatic fever*. The inflamed membrane may pour out fluid which then collects around the heart, a condition known as *pericardial effusion*. Whatever the cause of the inflammation the condition must always be regarded as serious, and the patient will usually require a long period of complete rest to allow the infection to subside.

Pernicious Anaemia (*see also* ANAEMIA).

The reader is referred to the article on ANAEMIA in general. Pernicious anaemia is a special variety of anaemia in which an essential substance in the manufacture of the red blood cells is missing. Part of this substance is derived from diet, part is manufactured within the body, and the complete substance formed by the union of these two parts is stored in the liver. When this factor is missing, the number of red cells becomes progressively reduced and may fall from the usual figure of five million per cubic millimetre of blood to less than one million. This is not all, for the substance concerned is not only necessary for the production of blood cells but is also required to keep the nerve cells healthy. In pernicious anaemia these cells often become diseased and weakness of the limbs and disturbances of sensation develop—a condition known as subacute combined degeneration of the spinal cord—subacute, because it is midway between acute and chronic, and combined because it affects both the motor and sensory nerves. Up to 1926 pernicious anaemia was

almost invariably fatal, but in that year it was discovered that raw liver could cure the condition. The reason for this is now easy to see. The missing substance is stored in the liver of animals as well as in the human liver, and thus by eating liver the patient can replace the deficiency. Concentrated extracts of liver are now usually given by injection, and these will restore health completely, and prevent the occurrence of nervous symptoms. Like the diabetic, however, the sufferer from pernicious anaemia must continue indefinitely with the injections, and even if he should feel well over a period of many months it is dangerous to stop treatment. This is particularly so on account of the spinal cord degeneration which may come on insidiously if the supply of liver is below the minimum requirement.

Phimosis.

This is the name given to a constriction of the foreskin in the male. Normally the foreskin can be pulled back to expose the tip of the penis, but sometimes the opening of the foreskin is too narrow to permit this. When this occurs it is usually best to deal with the condition by circumcision, since debris is likely to accumulate beneath the foreskin, and inflammation (*see* BALANITIS) will result. Sometimes, with a tight foreskin, it becomes constricted around the tip of the penis after it has been pulled back—a condition known as *paraphimosis*. For this, too, a circumcision is often the best treatment.

Phlebitis.

Inflammation of a vein. Veins may become inflamed as the result of disease or injury, and the most common situation is in the leg where the cause is often a varicosity

of the veins (*see* VARICOSE VEINS). The vein affected becomes hard, and can be felt like a cord beneath the skin, and it is often extremely tender. It is wisest to call in a doctor for this condition for it is liable to spread if not properly treated. He will probably prescribe rest in bed until the inflammation subsides.

Photophobia.

This term is applied when the eyes are unduly sensitive to light. It commonly occurs in any condition in which the eyes become inflamed, such as *conjunctivitis*, and may be a feature of generalised infections in which the eyes are involved, such as measles. It is a common symptom to accompany any severe headache, and frequently occurs during an attack of *migraine*. The treatment of photophobia depends upon the cause, but whatever that is, it is always best to avoid bright light and straining the eyes when they are in a sensitive state.

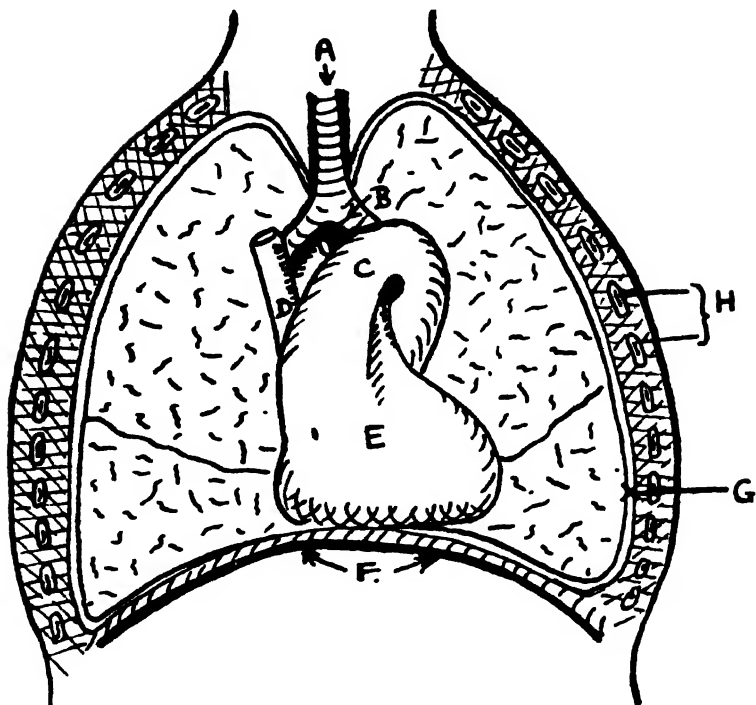
Phthisis.

A medical term for consumption, or tuberculosis of the lungs. *See* under TUBERCULOSIS.

Pink Eye.

The popular name for a variety of *conjunctivitis* (*see* under EYE, INFLAMED). The condition is caused by a definite germ and it often occurs in small epidemics, for instance in schools. The white of the eye becomes painful and inflamed leading to the pink appearance from which the condition derives its name. The treatment is the same as that for conjunctivitis in general.

HOME MEDICAL ENCYCLOPEDIA
THE CONTENTS OF THE CHEST
FRONT VIEW



KEY.

- A. The trachea, or windpipe.
- B. The bronchi.
- C. The aorta—the main artery from the heart
- D. The Vena Cava—the main vein returning blood to the heart.
- E. The Heart.
- F. The diaphragm—a sheet of muscle separating the chest from the abdomen
- G. The double layer of pleura covering the lungs.
- H. Ribs (cross section).

Figure 10.

Pleurisy.

Each lung is enclosed in a double layer of thin membrane which is known as the pleura (*see* FIG. 10, page 166). When this membrane becomes inflamed the condition is known as *pleurisy*. It is nearly always due to an invasion by germs which usually reach the pleura from the lung beneath. Thus pleurisy is very liable to follow infections of the lung—particularly pneumonia. When the pleura becomes inflamed it often pours out fluid which collects between the two layers, and this is known as a *pleural effusion*. During the early stages, pleurisy is usually accompanied by a sharp pain in the chest on breathing, since the inflamed layers of membrane rub against each other every time a breath is taken. In the later stages, if fluid forms, the pain passes off since the fluid prevents the two layers from coming into contact. However, the presence of the fluid reduces the movement of the lung so that there is often some shortness of breath, and the patient must rest quietly in bed until the condition subsides.

Apart from acute infections, such as pneumonia, pleurisy not infrequently accompanies tuberculosis of the lungs, and is sometimes the first symptom of this condition.

Pneumonia.

This disease is due to an invasion of the lungs by germs. There are several varieties of pneumonia depending upon the particular germ concerned and the parts of the lung which are affected. Thus *lobar pneumonia* is due to a specific germ, the pneumococcus, which attacks a whole lobe or segment of the lung at once causing it to become

solid. In *broncho-pneumonia*, which may be caused by a number of different germs, the infection is more scattered and occurs in small patches surrounding the bronchi, or breathing tubes. Pneumonia must always be regarded as a serious illness. It frequently follows some other respiratory infection, such as a cold or "flue", and the patient instead of getting better from this complaint begins to grow worse. Sometimes there is a pain in the chest if the pleura is involved (*see* PLEURISY), and there is usually a rising temperature. As more of the lung becomes involved in the inflammation, some shortness of breath becomes apparent, and there may be a tinge of blueness in the face and lips. It goes almost without saying that the patient with pneumonia requires careful nursing in bed. The atmosphere should be warm and kept at a fairly even temperature, though there must be some ventilation to ensure a supply of fresh air. No particular restrictions in diet are necessary, unless specially ordered by the doctor; but often the patient's appetite is poor, so that light nourishing meals will be required, which should include soups, meat such as chicken, and fish. An ample supply of fluid should be provided, and the patient should be encouraged to drink up to five pints in the twenty-four hours. Lemonade should be well sweetened with sugar or glucose, which helps to provide energy for the body. Fortunately most of the germs which cause pneumonia are sensitive to the sulphonamide (M & B) drugs and penicillin, so that the disease is much less dangerous than it was some years ago, before these drugs were discovered. Even so, it is not a condition with which one can afford to take risks, and severe cases are usually best treated in hospital where other means of treatment, such as oxygen, can also be used if required.

Pneumothorax.

The medical term for the presence of air between the layers of the pleura (*see* under PLEURISY). Normally the two layers of the pleural membrane are in close contact with each other, but sometimes, when there is disease present, a small hole may form through the inner membrane into the lung. This will allow air to escape from the lung into the space between the layers, and this air will press on the lung, causing it to collapse. In the treatment of tuberculosis of the lung, air is sometimes introduced deliberately into the pleural cavity—an *artificial pneumothorax*. The collapse of the diseased lung which this causes enables the inflamed area to be rested, and often accelerates the healing of the tuberculous patch.

Poisoning.

It sometimes happens that the layman is confronted with a case of poisoning. Many substances in everyday use are harmful to the human body, and one of these may be taken accidentally by adults or children, or may sometimes be taken deliberately in cases of intended suicide. The symptoms which most commonly occur are pain in the mouth, throat and stomach, vomiting and general collapse. In the later stages, if the victim survives, there is often diarrhoea. A sudden severe illness of this nature in a person previously quite well should give rise to a suspicion of poisoning, and if the victim is questioned it may be found that something out of the ordinary has been taken. The precise remedy for any particular poison depends, of course, on its nature, but the *general* treatment is the same in most cases. Send at once for the doctor and let him know that poisoning is suspected so that he can bring the

right equipment and thus save delay. Meanwhile the victim should be put to bed and kept warm. It is important to eliminate as much of the poisonous substance as possible, *as soon as possible*, and therefore the victim must be made to vomit. A dessertspoonful of mustard taken in a glass of warm water will usually bring this about, or alternatively double this quantity of salt may be used. In some types of poisoning, collapse of the victim occurs very quickly, and the breathing may stop. In this case it is best to carry out artificial respiration (*see* ASPHYXIA) until the doctor arrives in case there is still a chance of saving the patient. These general rules apply to all types of poisoning and should be applied to any case of poisoning—whether in a child who has eaten poisonous berries, or an adult who has attempted suicide—while waiting for the doctor. Many poisons have specific remedies but it is not possible in a book of this size to mention every possible type of poisoning, nor would the appropriate remedy be found in the house in most cases. A few of the more common types of poison are given below, together with their household remedy.

(a) *Acids*. These include sulphuric acid (oil of vitriol) and hydrochloric acid (spirits of salt). These acids are sometimes drunk accidentally in mistake for medicine or water. Acids are neutralised by alkalis and one of the following should be given as soon as possible. Lime water, ordinary whitewash, or alkaline stomach powder (e.g. MacLean's) which is found in many households as a remedy for indigestion. If none of these are available, plaster from the walls may be broken up and taken in water, and will serve in an emergency.

(b) *Alkalis*. The most common alkalis to cause

poisoning are the caustics, such as caustic potash and ammonia. These require acid to neutralise them, and vinegar, which is weak acid, can be found in every household. It should be given in a tumbler with an equal quantity of water.

(c) *Carbolic*. This is present in many disinfectants, such as "Lysol". Because of its distinctive smell it is rarely taken by accident, except by children, but is sometimes used for attempted suicide. It is a powerful poison but its effects can be somewhat delayed by giving alcohol. Brandy or whisky may be given if available, and white of egg and milk, which can be beaten up together, are also useful in delaying the symptoms.

(d) *Arsenic*. This is one of the most popular poisons for murder, but it can be very easily detected afterwards. It occurs in weed killers, etc., and is sometimes taken by accident. Fat and oils may delay the absorption of the poison into the system, so that butter or olive oil should be given while waiting for assistance.

Polycythaemia.

This is the medical term for a condition in which the number of red cells in the blood is increased above the normal. (See also the article on ANAEMIA.) The condition is not very common. It often gives rise to a very ruddy complexion, and may be associated with headaches, and sometimes with a raised blood pressure. Treatment by means of X-rays often brings benefit, and there are also medicines which can be taken by mouth which will reduce the number of cells to a more normal level.

Polypi.

A polypus is a small, pear-shaped growth sometimes forming on one of the internal surfaces of the body. Polypi are usually caused by a chronic infection and are most commonly found in the ears or the nose. They also occur in women, sometimes, at the *cervix* which is the exit from the womb. Polypi are not dangerous in themselves, but they sometimes cause irritation and they may bleed from time to time. They are usually easily removed by a small operation.

Pregnancy.

Pregnancy occurs when the female ovum is fertilised by the sperm, or male seed. The first indication is usually a stopping of the monthly "period", though there are other causes for this (*see* AMENORRHOEA). During the early months of pregnancy there is sometimes a feeling of sickness or actual vomiting in the morning. The breasts enlarge somewhat and during the first pregnancy the nipples and surrounding skin become darker in colour. After about the third month the abdomen becomes noticeably and progressively larger. The normal duration of pregnancy is nine months, or to be more precise, 40 weeks. The expected date of birth can be calculated quite easily as follows. Take the first day of the last monthly period, count back three months and then add seven days. Thus if the last period started on August 14th the birth would be due on May 21st. Every woman should put herself under the care of her doctor or a special clinic during pregnancy. It is important to have a regular check to see that all is going well, and she will require advice about such things as diet and exercise so that she can remain in good health during the time she is carrying.

Premature Birth.

A birth occurring before the 40th week of pregnancy. *See* the articles on MISCARRIAGE and ABORTION.

Prepatellar Bursitis.

An inflammation of the bursa, or small sac of fluid which lies over the knee cap (patella). The condition is known popularly as "housemaids' knee". *See* the article on BURSA.

Pruritus.

This is the medical term for itching. *See* the article on ITCH.

Psoriasis.

This is a skin disease in which hard, red, scaly patches appear on the skin. They often affect the skin near the joints such as the elbows, or behind the knees though other parts are often involved as well. Unfortunately the disease is a very chronic one, and the patches are extremely difficult to clear up. The exact cause of the condition is not known, but the disease is not dangerous, and very often sufferers from psoriasis enjoy very good health, apart from their skin trouble. Treatment is very difficult. Certain ointments may help and in some cases X-ray treatment or exposure to sunshine or ultraviolet light results in an improvement.

Psychosis.

This is the medical name for the condition of insanity. Broadly speaking, mental disturbances can be divided into

three main classes. The least severe, and most common of these is a *neurosis* in which there is some mild disturbance of the mental outlook—often taking the form of undue anxiety about trivial matters, and then spoken of as an *anxiety neurosis*. A more severe mental upset may be termed a *psycho neurosis*, and serious mental disorder in which there is a true insanity is known as a *psychosis*. For further information the reader should consult the article on INSANITY.

Ptomaine Poisoning.

This term is now little used. It was thought at one times that certain types of food poisoning were due to substances called “ptomaines” which were formed when food went bad. Further investigation has shown that ptomaines are not really to blame, so that the term is dropping out of use. The reader should consult the article on FOOD POISONING.

Pulse.

The pulse is caused by an expansion of the arteries or blood vessels which corresponds with each beat of the heart. Counting the pulse is thus a convenient way of counting the heart beats. In most infectious illnesses the heart beats faster than usual in the same way that the temperature becomes raised (*see* the article on FEVER), and the exact rate of the heart often provides useful information to the doctor. The pulse may be counted from any artery, but the one at the wrist is usually chosen as being convenient. The radial artery runs over the bones at the front of the wrist just below the base of the thumb. To count the pulse, the finger-tips should be

placed in line over the artery with the patient's wrist straight, and the beats should be counted for a minute. (See FIG. 11, below.) The normal rate for an adult is about 70 to 80 beats per minute.

TAKING THE PULSE

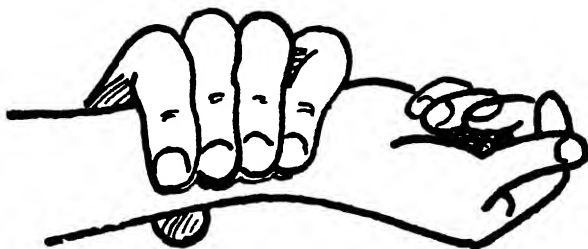


Figure 11.

Purpura.

A condition in which small blood spots appear in the skin. There are a number of different causes for this disease. It may be due to an abnormality of the blood itself or to a disease of the small blood vessels, or capillaries, which then allow a little blood to leak out. The spots usually look like little bruises—about the size of a large pinhead in the skin—and they may also form in the internal organs. It is not easy to generalise about this condition since the course of the disease depends upon the exact type. Some types are very serious, and the patient is gravely ill, while in others the condition is little more than a passing inconvenience. The mild type of purpura may sometimes accompany other infectious illnesses.

Pus.

When a part of the body is attacked by germs a thick fluid is often formed which is known as *pus*. For further information see the article on **ABSCESS**.

Pyelitis.

The human kidney can be divided into two parts. The bulk of the organ is made up of small blood vessels and little tubes into which the impurities from the blood are filtered. These little tubes open into a chamber or small sac known as the pelvis of the kidney, in which the urine collects. Sometimes this part of the kidney is attacked by germs, which usually reach it by way of the bladder, and when this happens the condition is known as *pyelitis*. It is more common in women than in men (*see* **CYSTITIS**). The symptoms are usually pain in the loin, pain and frequency in passing water and a high temperature. Sometimes there is vomiting and if the temperature is very high there may be attacks of shivering (rigors). The treatment of pyelitis is to rest in bed, to drink plenty of fluids to help wash out the infection and to take medicines which will help kill the germs. Fortunately most of the germs which cause pyelitis are sensitive to the sulphonamide (M & B) drugs, so that the condition can usually be cured fairly rapidly.

Pyorrhoea. ---

A chronic infection of the gums, which in severe cases may lead to loosening of the teeth. Pyorrhoea is not a condition which one can afford to neglect. Not only is there a danger of losing the teeth, which in long standing cases may have to be taken out, but the poison from the infection is swallowed and also absorbed into the blood

stream, and may give rise to indigestion and other unpleasant results. The sooner your dentist can start treatment for this condition the easier it is to cure, so that if you have any persistent soreness of the gums, go and get proper advice.

Q

Quarantine (AND INCUBATION PERIODS).

This is the time during which a disease may develop after exposure to the infection. Most diseases have what is known as an incubation period, during which although the germs are in the body they do not produce symptoms. In the common cold for instance the incubation period is usually about three days—that is to say it takes three days for a cold to develop after “catching” one from someone else. For safety the period of quarantine for an illness is usually fixed at two days longer than the incubation period. Once the period of quarantine has passed without any symptoms developing, the person can be regarded as out of danger of infection, provided there has been no further contact with an infected patient.

The quarantine periods for the common infections are shown below:

Chicken pox	20 days	Diphtheria	12 days
German measles	22 „	Infantile paralysis	14 „
Influenza	5 „	Measles	16 „
Mumps	28 „	Scarlet Fever	10 „
Spotted fever	7 „	Small pox	16 „
Typhoid fever	23 „	Whooping cough	21 „

Quinsy.

This may be defined briefly as an abscess on the tonsil (*see* ABSCESS). The tonsil is very liable to infection by germs and sometimes this spreads into the tissues beneath the tonsil where a small abscess forms. There is usually

a fairly high temperature, considerable swelling of the throat, and quite a lot of pain. Hot gargles are usually prescribed and sometimes the quinsy bursts by itself, releasing the pus. Often, however, it may have to be "lanced" by the doctor before it will clear up.

R

Rash.

A rash is the common name given to an eruption on the skin. There are many different types, all of which have special names. The more common ones are described below:

Erythema is a diffuse redness of the skin—like a blush. It may follow exposure to the sun or a mild burn.

Macules are small patches on the skin which are *not* raised above the surface. A freckle for instance could be described as a brown macule. Red macules occur in certain skin diseases.

Papules are small pimples on the skin. The rash of measles for instance usually consists of a mixture of macules and papules. That is to say, there is a patchy discoloration of the skin in some places *not* raised above the surface, and in other places raised into small bumps.

Vesicles are small blisters containing fluid.

Pustules are small blisters containing pus or “matter”. They occur in ACNE and also in many other conditions.

Renal Colic.

It sometimes happens that stones form within the kidney—usually in the collecting part of the kidney, or pelvis (*see* PYELITIS). If the stone is small enough it may try to pass down from the kidney to the bladder through a narrow tube known as the ureter. If this happens the

stone usually causes a severe pain which comes on in spasms and is known as *renal colic*. This pain commonly starts in the loin and radiates downwards towards the groin on the same side. Renal colic may be accompanied by blood in the urine due to injury to the ureter as the stone passes through it. The condition calls for expert treatment, and is often best dealt with in hospital where X-rays and other means of investigation are available. The presence of blood in the water (*haematuria*) whether associated with pain or not is always an indication that something is amiss in the "water works" and should therefore demand medical attention.

Retention of Urine.

When a certain amount of urine has collected within the bladder the pressure begins to rise and we feel a desire to pass water. When circumstances permit, we allow the muscle guarding the exit from the bladder to relax and the bladder is emptied—under normal circumstances emptied completely. *Retention of urine* means that there is some interference with this normal emptying and either the bladder cannot be emptied at all (*acute retention*), or else emptying is not complete. Acute retention of urine most often occurs in elderly men due to a swelling of the prostate gland which surrounds the neck of the bladder. Medical assistance must be sent for at once, and it is often necessary for the doctor to pass an instrument (catheter) to draw off the urine. Acute retention also occurs in women during the early months of pregnancy, when, if the womb becomes displaced, it may press on the lower part of the bladder. It is usually not difficult to "replace" the womb, after which the condition clears up. Difficulty in passing water will often precede an actual retention,

and it is much better to seek advice at this stage than to wait until matters are really serious.

Rheumatic Fever.

This is a relatively common infection of childhood of which we still do not know the precise cause. It may be due to a virus (a very small germ) or to the toxin (poison) from some other germ such as the streptococcus (FIG. 6, page 98). The disease appears to have some association with poor living conditions, particularly dampness and overcrowding. The brunt of the infection falls on what are known as the "connective tissues" in the body, and these are found chiefly in the muscles and joints. The disease not infrequently follows some other illness such as a sore throat, and one or more joints become painful and swell up. Aches and pains in the limbs are common and the temperature is raised particularly in the evenings. Rheumatic fever is usually a rather prolonged infection and may take several months to settle down. The chief danger from the disease is that the heart may become affected. The heart itself is a specialised type of muscle, and this muscle together with the valves and covering membrane (the pericardium) are all derived from connective tissue. They are, therefore, all liable to become inflamed during a rheumatic infection, and unfortunately the damage which is done may remain permanent. *It has been proved without any doubt that the more the heart can be rested during an attack of rheumatic fever the less likely it is to be damaged.* For this reason alone, *prolonged rest in bed is vitally necessary in treating this disease.* Any child who has suspicious symptoms—complains of pain in the limbs, or develops a swollen joint—should be seen by the doctor without delay. If rheumatic fever is

diagnosed, complete rest in bed will be prescribed, either at home or in hospital. As we have said, it is most important to see that this is carried out. It is very irksome for the child to have to spend several weeks or even months in bed, but unfortunately once a heart valve, for instance, has become damaged it is not possible to replace or repair it, and the patient will therefore have a "weak heart" for the rest of his days. The only way to avoid this is to rest the heart during the acute attack. There is one further complication of rheumatic fever which requires mentioning. Sometimes the connective tissue in the brain becomes involved, particularly that part of the brain which co-ordinates movements. When this happens, movements become unsteady and jerky—a condition known popularly as St. Vitus Dance. For further information *see* the article on CHORLA.

Rheumatism.

This is a rather vague term which covers a number of conditions which are associated with pain in the joints or limbs. Rheumatism which affects the joints is more accurately known as ARTHRITIS, and the reader should consult this article for further information. Other varieties of the condition are described under MUSCULAR RHEUMATISM and BACKACHE.

Rickets.

This is a deficiency disease, due to lack of vitamin D (see page 14) which affects growing children. For the proper growth and strengthening of bones, a mineral salt—calcium—is required, and this salt cannot be absorbed from the diet and utilised by the body without the aid of small quantities of vitamin D. This vitamin occurs

chiefly in milk and butter, but can also be manufactured by the body itself with the aid of sunlight—but not without. If the diet is lacking in the vitamin containing foods, and if the child lives in a town, for instance, and does not receive much sunshine, then the absorption of calcium is liable to fall below the minimum requirements. When this happens growth is stunted and the bones become soft and bend. *Rickets* is now a rare disease in England because steps are taken to see that all children have an adequate supply of vitamin D. Extra milk is provided at schools, margarine usually has vitamin D added artificially, and most young children are given cod liver oil, which is very rich in the vitamin. Occasionally, the disease is still seen, when through ignorance these precautions are neglected.

Rigor.

This is the medical term for an attack of shivering which occurs when the temperature is raised. As has been explained elsewhere (*see* FEVER) the body's temperature is accurately adjusted. When the body wishes to increase its temperature one of the ways it can do this is by shivering. This sets the muscles working in little to and fro movements, and this generates heat. Under normal circumstances, when the body becomes chilled shivering is liable to occur. If the body is invaded by germs and the temperature rises suddenly severe shivering attacks may occur and these are known as *rigors*.

Ringworm.

This disease is caused by a fungus, or yeast-like organism, which attacks the skin and the roots of the hairs. It is contagious and may occur in small epidemics,

for instance in school children. It most commonly affects the hairy skin at the back of the neck, and the infection spreads in a circular fashion, forming a round area which gives the disease its name. The condition is not very easy to clear up since the organisms penetrate deeply into the hair roots and it is often necessary to remove the hair entirely (e.g. by the use of X-rays) from the affected part before the infection can be stamped out.

S

Salpingitis.

The upper end of the uterus, or womb, is connected by means of two small tubes to the ovaries, which lie one on either side of the lower part of the abdominal cavity. These tubes are known as the fallopian tubes, and when they become inflamed the condition is known as *salpingitis*. Salpingitis may accompany or follow any infection of the uterus itself, but one of the more common causes is neglected gonorrhoea, in which the infection gradually works its way up until the tubes are involved. Salpingitis, in common with most infections, is usually accompanied by some fever, and there is pain low down on one or other side of the abdomen. If the right tube is the one affected, the condition may be confused with appendicitis. The condition is not one which can be neglected, especially as it is sometimes followed by sterility.

Scabies.

This is a skin infection, popularly known as the "itch" which is caused by a small animal or mite. The mite makes small burrows in the skin in which it lays its eggs; and since it is most active when the skin is warm, the itching is usually at its worst in bed at night, or when sitting by the fire. The hands, particularly in the webs of the fingers, and the wrists are the parts most often affected. The condition is contagious, being passed from one person to another, and like louse infestation is favoured by overcrowding and lack of cleanliness. Treatment consists in having a hot bath and scrubbing the affected

parts with a stiff brush to open up the burrows, changing and boiling all the clothing and bed-clothes, and applying something to kill the mites. Until fairly recently sulphur ointment was used, but this was messy and rather tedious. We now have better means of dealing with the mites, and one of the most effective is an emulsion of Benzyl Benzoate, which is applied to the skin and allowed to dry, once a day for three days running. This will nearly always bring about a cure, but unless the clothes are properly dealt with, and all the members of the family are cleared at once, reinfection is likely to occur.

Scalds (*see also* BURNS.)

A scald is an injury to the tissues by a hot liquid or steam. The nature of the injury, and the treatment does not differ from that due to dry heat, and the reader should consult the article on BURNS.

Scarlet Fever.

An acute infectious illness, usually occurring during childhood. The disease is due to a specific germ, which is a streptococcus (FIG. 6, page 98). The germ attacks the throat chiefly, and its toxin, or poison, is absorbed into the blood stream and causes the rash to appear on the skin. The disease is infectious, and the incubation period is short, being four days on the average. The illness usually commences suddenly with a sore throat, accompanied by headache, fever, generalised aches and pains and sometimes sickness. The temperature is often quite high on the first day: the throat is red and inflamed, and the tongue often presents a characteristic appearance, being covered with a white fur through which bright red papillae (small bumps) project. It has been aptly called a "strawberry

and cream " tongue. The rash appears on the second day, first on the neck and chest and later over the whole body. It consists of a generalised reddening of the skin (erythema) in which there are very small bright red spots. The rash usually continues to develop for two or three days and then fades, being followed by some peeling of the skin. As the rash fades the other symptoms of the illness abate, and if there are no complications the patient is convalescent by the end of a week. There is no doubt that scarlet fever is not nearly so serious an infection as it used to be at the beginning of this century, but even so it cannot be treated lightly since there is always a danger from complications. One of the most serious is an inflammation of the kidneys (nephritis), and there are others such as inflammation of the ears (otitis media) or pneumonia. The patient must always be kept in bed until after the temperature has subsided, and because of the infectivity of the condition is best treated in hospital. He should be isolated from others until peeling of the skin is complete. The cardinal feature of scarlet fever is the combination of a sore throat with the development of a red rash on the skin; and if these occur together, especially in a child, a doctor must always be called. Modern methods of treatment, using the sulphonamides (M & B), penicillin and antitoxin can greatly reduce the danger from the infection and its complications.

Sciatica.

This is the medical term for pain in the sciatic nerve, which is a large nerve running through the buttock and down the middle of the back of the leg. Sometimes the nerve becomes inflamed due to infections in other parts of the body (*see* NEURITIS), but sometimes the pain is due to a

“displacement” in the spinal column, or back bone, where the nerve emerges from the spinal cord. The bones of the spinal column are each separated by a small disc of “gristle”, and if one of these intervertebral discs becomes displaced it may press upon the nerve. In many cases sciatica is not serious and will respond to simple remedies such as rest, but if a disc is displaced an operation may be required to rectify the matter.

Scurvy.

This is a deficiency disease, due to lack of vitamin C (*see* page 14). Vitamin C is necessary to keep the blood vessels healthy, and in its absence the small capillaries become weak and allow bleeding to take place. Vitamin C is found in fresh fruits and vegetables, of which nearly every one now has an adequate supply. The disease is practically unknown in England today, but occasionally occurs in the very poor, or in “cranks” who adopt some peculiar diet which does not include vegetables.

Sea Sickness.

It has been explained elsewhere that the ear is an organ of balance as well as an organ of hearing (*see* GIDDINESS). When the balancing mechanism is overstimulated it may set up a reflex (*see* under PAIN) within the brain which causes vomiting. This is the basis of travel sickness which is due to constant motion, and the mechanism is the same whether it be sea, air, or car sickness. Some people are better able to stand movement of this type than others, and therefore make good sailors; but in everyone the balancing mechanism can gradually adjust itself, so that after some days at sea the tendency to sickness gradually wears off. The most dangerous time is thus at the beginning of a

journey, and it is at this time that precautions against sickness are most required. It is best not to load the stomach, and only a light meal should be taken before embarking by those who are prone to sea sickness. Alcohol is used as a remedy by some, but it is liable to be a double-edged sword, and especially in any quantity may make the sickness worse. It is much better to do something to distract the mind than to wait expectantly for the inevitable. Stay up and about if possible. Regarding drugs a mild sedative which can be prescribed by your doctor may help, but the most effective remedy is a drug called hyoscine. This can only be obtained on a medical prescription, but some of the big firms make special tablets against sea sickness, and for those who suffer badly it is well worth obtaining a supply before starting out on a voyage.

Sebaceous Cyst.

A swelling in the skin caused by the blockage of a type of sweat gland. (*See under CYST*).

Septicaemia.

This is said to occur when germs invade the blood stream and continue to multiply as they circulate around the body. There can be no generalised description of septicaemia since the nature of the illness must depend largely on the type of germ concerned; but the condition is always a serious one, and means that the body's defence force has been almost overcome by the invasion. In those cases in which the organism is sensitive to the sulphonamides (M & B) or penicillin the outlook is much better than it was some years ago, but even so these cases require very skilled treatment.

Shingles.

An infectious illness due to a small germ or virus, which is probably the same as that causing chicken pox. In chicken pox it seems that the infection is generalised; whereas for some reason that we do not understand, in shingles, the damage is confined to an area of the body supplied by one particular nerve. The most common site for shingles to develop is on the trunk, but the face or limbs may sometimes be affected. There is usually some pain for a day or two before any other symptoms develop, and this is followed by a very characteristic eruption. Small patches of skin become inflamed (erythema) and on each patch there is a cluster of vesicles, which are small spots with white tops containing fluid. Furthermore these patches are all arranged on a strip of skin supplied by one nerve. In the trunk, for instance, the nerves follow a circular path from the backbone to the front, roughly corresponding to the line of the ribs; and the patches of inflamed skin will therefore appear on this pathway. The inflammation lasts for a week or two and then gradually subsides. The patient is best kept in bed during the acute stage of the attack, and the spots must be kept dry. Shingles is not a dangerous disease, and the "old wives tale" that death will occur if the spots meet round the front of the body is quite unfounded. Usually recovery is quite complete in about three weeks; but sometimes, particularly in the elderly, there is some persistent pain even after the eruption has gone.

Shock.

This term has a very definite medical meaning, and is applied to a condition which we do not fully understand, which occurs after the body has sustained any severe

injury. It has a definite connection with pain, and broadly speaking the more painful an injury the more liable is it to be followed by shock. In simple terms it seems that when severe shock develops the body appears to give up the struggle to keep alive. The injured person takes less and less interest in his surroundings or himself; the pulse becomes fast and gradually weaker; the breathing is shallow, and he slips gradually from semi-consciousness into unconsciousness and may then die. There are three cardinal principles in treating shock. Firstly, it has been said that the more the pain the more is the degree of shock; and since movement is painful when any injury has occurred, a badly injured person *should be moved as little as possible*. Secondly, as shock develops the body becomes cold, and this must be prevented. Therefore everything must be done to keep the victim warm. Blankets and hot water bottles should be applied, and provided there is no internal injury (e.g. to the stomach) hot drinks should be given (provided the patient is conscious), of which well-sweetened tea is one of the best. Thirdly, something must be given to relieve the pain, such as morphia, and since these drugs may only be prescribed by a doctor help must be summoned as quickly as possible.

Sinusitis.

An inflammation of the sinuses, which are hollow spaces in the bones of the skull communicating with the nose. See the article on ANTRUM.

Smallpox.

An infectious illness due to a specific germ which is one of the viruses. Smallpox resembles chicken pox in many respects, but is a very much more serious illness which

carries a considerable death rate. The spots of smallpox have the same general appearance as those of chicken pox but they tend to appear more towards the extremities of the body, and in cases which recover they leave permanent scars. Apart from an occasional small epidemic brought in from abroad, the disease is now very seldom seen in this country. This is largely due to the almost universal vaccination of young children. Vaccination introduces germs into the body which are very similar to the small-pox germ. They do not produce the harmful effects of smallpox, but stimulate the body's defences and cause "antibodies" to be formed which kill the germs. These antibodies remain for a number of years and are also effective against the germs of smallpox itself. Thus a person who has been vaccinated has a defence force all ready prepared if ever he is exposed to smallpox infection. He is therefore unlikely to catch the disease, and even if he should, the attack will be a mild one. There are some people who are opposed to vaccination. Smallpox is a terrible disease, and even those who recover are usually scarred for life. Complications from vaccination are exceedingly rare, so that in my opinion there is no excuse for parents who do not take the opportunity of having their children protected against smallpox.

Spleen.

The spleen is a rounded organ which lies in the upper part of the abdominal cavity on the left, under cover of the lowest ribs. It is able to store blood corpuscles and can release these into the general circulation if they are required suddenly in an emergency. It also removes the old and worn-out blood corpuscles from the circulation.

The spleen is not necessary to life, and if for instance it is badly injured, it can be removed without any apparent ill effects.

Sprains.

The joints in the body are held together by tough bands of tissue which are known as ligaments. If a joint is carried beyond its normal range of movement, by a sudden twist for instance, the ligaments binding it may be strained or even torn. Such an injury is known as a *sprain*. There is a sudden pain in the joint which persists, and after a while the joint becomes swollen and stiff. One of the most common joints to be sprained is the ankle, which is usually turned under while walking or running on a rough surface. The best treatment is undoubtedly rest, and if the sprain is very painful, with much swelling, a day or two in bed may be required. After this, or from the start with less serious sprains, the joint may be used provided it has some support. An elastic adhesive bandage, such as elastoplast, is very useful, and should be applied in a figure of eight around the bottom of the foot and lower end of the leg (FIG. 12, page 195.) It should be worn until the tenderness and swelling have subsided, which may take ten days to a fortnight. The wrist is also a joint which is often sprained, and it should be supported in the same way with a spiral bandage applied from the knuckles to about half way to the elbow. It is always best to consult a doctor for any serious sprain, for sometimes there is an injury to the bone, or small fracture, in addition to the injury to the ligaments. If this is neglected it may result in permanent stiffness in the joint.

BANDAGING SPRAINS

(Showing the application of elastic adhesive bandage to support a sprained ankle and a sprained wrist).

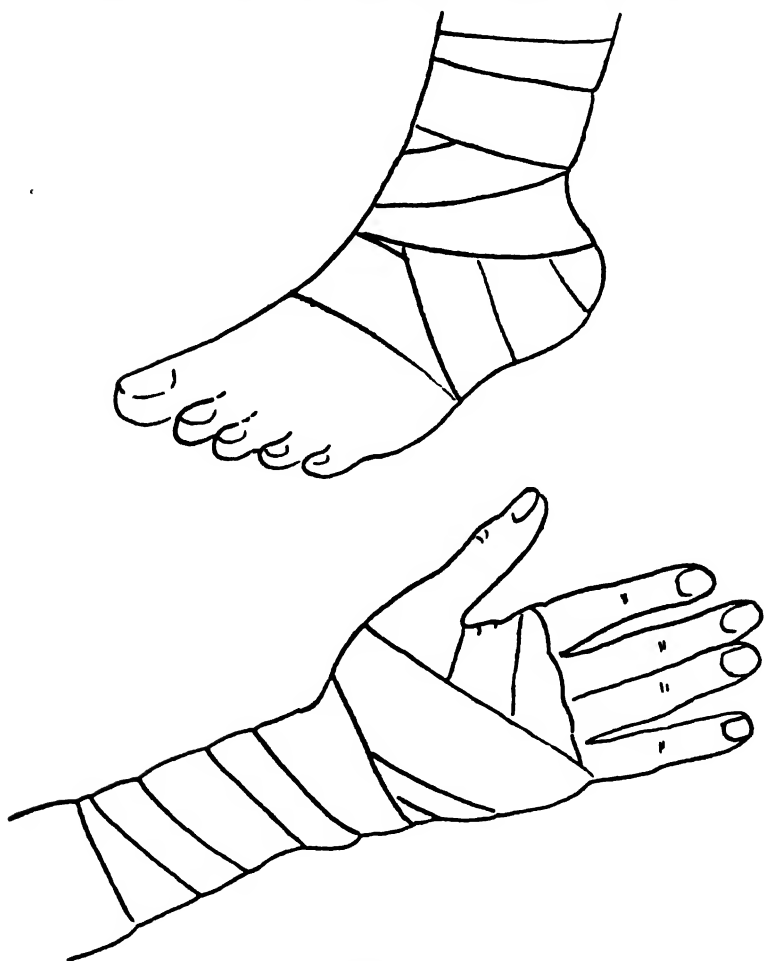


Figure 12.

Sputum.

The name of sputum is given to matter which is coughed up. Normally there should be none, for although there is a slight secretion within the bronchi, or breathing tubes, it does not collect in sufficient quantity to come up on coughing. The production of sputum is an indication that the bronchi are irritated. It often occurs in heavy smokers who inhale, when the sputum is dark in colour. Sputum is also produced in a large number of diseases. Bronchitis and pneumonia are two examples, and tuberculosis, in which the sputum may contain the tubercle bacillus is another. Any persistent cough with which sputum is regularly produced should be taken as a warning that a medical overhaul is advisable.

Squint.

Normally the two eyes are most carefully co-ordinated so that they always point in exactly the same direction. This enables the brain to make one picture from the images received from the separate eyes. When there is a squint (known medically as *strabismus*) the eye muscles are out of balance so that one eye points inwards or outwards. This makes it difficult for the brain to fuse the two images, so that after a time the affected eye becomes "lazy" and takes little part in vision. It is thus important that a squint should be treated at an early stage before the affected eye has had time to become lazy. Squinting is normal in all very young babies, who have not learnt to move the eyes together; but if a squint persists after the child is walking and talking advice must be sought. Treatment may be by means of special eye exercises, by covering the sound eye for a time in order to make the

squinting eye do more work, by prescribing glasses, or in some cases by means of an operation to correct the working of the eye muscles.

Stammering.

This is a speech defect in which there is a recurrent hold up in the smooth flow of words. There are different types of stammering, one of the most common being a repetition of the beginning of a word, especially if it begins with a consonant (e.g. c-c-c-c-consonant). The condition is always made worse by nervousness, and this often sets up a vicious circle, the patient being nervous that he will stammer and therefore stammering more. Stammering sometimes develops in naturally left handed-children who have been forced to write with their right hands, and this is something which should never be done. In a right-handed person the speech centre (that part of the brain controlling speech) is on the right, the centre for the use of the right hand being on the left. In a left-handed person the speech centre is on the left of the brain, and if the right hand is forced into unaccustomed use, this appears to interfere in some way with the normal working of the speech centre, so that stammering may result. It is always worth while seeking expert treatment for a child who stammers at an early stage. Special methods of speech training have been developed, and it is much easier to cure the abnormality at a time when it has not become really firmly established.

Sterility.

An inability to produce a family is often a great source of worry to a married couple. There are many causes for

sterility in both men and women, so that either partner may be at fault. In these circumstances it is always worth while obtaining expert advice, as in a number of cases the cause may be a simple one which can easily be remedied. Your own doctor can advise you, or there are a number of special clinics (e.g. those under the control of the Marriage Guidance Council) where doctors who specialise in this work may be consulted. See also the articles on ARTIFICIAL INSEMINATION and IMPOTENCE.

Stings.

A number of insects such as bees, wasps and some ants are able to injure the tissues by injecting material by means of a special sting or even by biting. The material which produces the irritation is most commonly an acid, and the pain can sometimes be alleviated by applying an alkali. This may be done by using a wet compress on which ~~sodium~~ bicarbonate powder has been sprinkled. Stings are usually not serious, but scratching should be avoided since it may introduce germs into the tissues and thus lead to infection.

Stroke.

Broadly speaking the right half of the body is controlled by the left half of the brain and vice versa. A stroke may be described as a sudden paralysis of one half of the body. It is due to damage to the opposite half of the brain, and nearly always results from some interference with the blood supply. One of the most common causes is a *cerebral haemorrhage* in which there is bleeding into the tissues of the brain due to the rupture of a blood vessel. This is sometimes a late consequence of high blood

pressure, or may be due to a weak patch in the wall of one of the arteries in the brain. In other cases the stroke is not due to bleeding but to a blood clot in one of the arteries, which deprives a part of the brain of its blood supply. Sometimes the clot forms in the vessel itself due perhaps to a rough patch on the wall. This is a *cerebral thrombosis*. In other cases the clot may form elsewhere and be carried to the brain in the circulation, plugging one of the arteries—a *cerebral embolism*. Whatever the cause of the stroke the results are much the same. The patient usually becomes suddenly unconscious, and if there is a recovery from the acute attack one half of the body is found to be paralysed. There is often a very considerable degree of recovery after a stroke, since the remaining undamaged parts of the brain are able to take over some of the functions of the damaged part. This, however, takes time and calls for much perseverance on the part of the patient. Usually the younger the victim the more the recovery that can be expected, and anyone who has suffered from a stroke must on no account give up hope. Special exercises for the paralysed limbs will usually be ordered, and if these are carried out regularly, slow but steady improvement will nearly always reward the victim.

Stye.

A stye is a small boil which develops on the eyelid due to infection at the root of one of the eyelashes. Treatment should consist of resting the inflamed eye, using frequent warm eyewashes, and applying some form of antiseptic to the eyelids. "Golden eye ointment", which contains 1% mercuric oxide is useful, and in some cases penicillin may be of value. On no account should a stye ever be

squeezed or pressed, as this is liable to spread the infection. As the styte comes to a head it will often be seen that one particular eyelash is growing from its centre, and this should be removed with tweezers.

Suffocation.

This occurs when the body is deprived of air—a state of affairs which cannot last long without death occurring. For causes and treatment of this condition *see* the article on ASPHYXIA.

Sunstroke.

This condition is due to overexposure to the sun—especially exposure of the head and neck. Sunlight is very rich in ultra-violet rays, and until the body has become acclimatised (and sometimes even then) these are capable of damaging the tissues. Prolonged exposure without any head covering is liable to be followed by a severe headache and general prostration. Prevention is easy, and no one should remain long in strong sunshine without an adequate cover to the head, and preferably one that also shades the back of the neck. The headache which results in the unwary can usually be relieved by aspirins, and for severe cases a day in bed following the exposure will usually put matters right.

Sunburn.

After exposure to sunlight the skin produces a brown pigment which protects it from damage by the ultra-violet rays (*see* the preceding article). The development of a

“tan” takes some time, and if the skin is exposed for too long before this has occurred, it may be quite severely burnt. The symptoms are delayed, so that the fact that one feels quite comfortable while sunbathing is no guarantee that damage is not being done. People vary in their sensitivity to sunlight, fair and red-haired people usually being more sensitive than the dark. Everyone, however, needs to take special care when coming into contact with strong sunlight for the first time after the winter. Half an hour's sunbathing is probably more than enough on the first day of a holiday, and this may be gradually increased day by day if there is no soreness. If the skin has become burnt, all further exposure must be stopped until the burn has subsided. A useful lotion, which can be obtained from the chemist, is calamine lotion containing 4% tannic acid; but this must be kept out of the eyes and mouth. It should be remembered that while oiling the skin may keep it supple and help towards an even tan, the oil will not protect against sunburn to any degree; and it should also be remembered that time spent bathing should be counted in the time of exposure to the sun, since the ultra-violet rays can penetrate some distance in water.

Suppuration.

The form of pus, or matter, due to an infection by germs—sometimes known as “festering”. See the article on ABSCESS.

Syphilis.

The most serious of the venereal diseases—those diseases spread by sexual contact. It is due to a specific germ, which is a spirochaete (see FIG. 6, page 98.) The course of the

disease can be divided into several well-marked stages. The incubation period (*see* under QUARANTINE) is usually four or five weeks but may vary between 10 and 90 days. The first symptom (the primary stage) is a small painless spot at the site of infection, usually on the genitals, but occasionally elsewhere such as the lips. This spot breaks down into an ulcer or small sore, oozing serum which is highly infective; and the glands in the neighbourhood often become a little swollen. The severity of this sore, or *chancre* as it is called, is very variable; and in some cases it may be quite small and only temporary. It is liable to be missed in women because of its internal situation.

From the site of infection the spirochaete soon passes into the blood stream and becomes distributed throughout the body. This is the secondary stage. Usually there is a generalised rash which develops 3 or 4 weeks after the chancre, and the glands in other parts of the body may become enlarged. The rash takes many different forms, and may be associated with ulcers in the mouth and some falling of the hair. The joints are also involved in a number of cases and become swollen. Sometimes there is some fever.

From the second stage the disease passes into the third, in which deep but painless ulcers, known as gumma, may form in the organs and in the skin. In the late stages of the disease the nervous system is particularly liable to be attacked. There may be a slow paralysis in which walking becomes more and more unsteady due to a degeneration of the spinal cord known as *tabes dorsalis*; or in other cases the brain is affected, and there is a more generalised paralysis together with progressive mental impairment—a condition known as *general paralysis of the insane*.

(G.P.I.) Practically no organ in the body is immune from damage in the late stages of untreated syphilis. The heart may be damaged, the liver affected and vision may be lost to give only a few examples. The course of the disease is very slow, and symptoms involving the nervous system, for instance, may develop twenty or more years after the original infection. The disease is practically never caught apart from sexual union, since the spirochaete dies very rapidly when outside the human body; and infection from a lavatory seat, for instance, is a very remote possibility. Infection through kissing is most rare. The only real exception is the newly-born child to whom the infection can be passed by the mother either before or after birth.

? There is no doubt at all that syphilis can be cured but the earlier treatment can be started the easier this is; and in any event treatment will often take a long time. It cannot be too strongly emphasised that the disease is very insidious, and as suspicious symptoms developing in anyone who has run a danger of infection should always lead to advice being sought. Your own doctor can be consulted, or there are special clinics in every part of the country where free and confidential treatment can be obtained. Although penicillin is a new weapon in the fight against syphilis, treatment is often very tedious, and may take years. It should be realised that even though all the symptoms have disappeared, and the patient feels perfectly well, the germs may still be lurking in some part of the body, and can produce their effects many years later. It is therefore very dangerous and extremely foolish to stop treatment before your doctor is quite satisfied that it has been sufficient. Even then he will almost certainly ask you to report back after an interval for a further blood

test and check up, and for your own sake and for the sake of those you might infect it is most important that you should do this.

There is no real prevention against syphilis except clean living, and those who lead loose lives will always run a danger of infection.

T

Tachycardia.

The medical term for an increased heart rate. This commonly occurs when the temperature is raised (*see* PULSE); or with a normal temperature may be due to nervousness when it is often associated with palpitations. It is occasionally due to heart disease, and another not uncommon cause is an overaction of the thyroid gland. (*See* GOITRE.)

Tetanus.

This disease, commonly known as lockjaw, is due to a specific germ which is rod shaped and often contains spores (*see* FIG. 6, page 98). The toxin, or poison, from the tetanus bacillus has a special action on the nervous system—particularly on the motor cells which send the messages which move muscles. It causes a state of irritability in these cells which results in a spasm, or painful contraction of the muscles. In some cases the jaw muscles may be involved, and this fact is responsible for the popular name for the disease lockjaw. The tetanus bacillus usually gains entry to the body through a small cut, especially a dirty cut, since the germ lives in soil. After an interval, which may be long or short, the spasms begin to develop, and the patient often runs a high temperature. Tetanus is always a very serious illness which requires very careful treatment. Serum, containing antitoxin which neutralises the poison, is often of value if given in the early stages, therefore call the doctor urgently.

Thrombosis.

The medical term for the formation of a blood clot within a blood vessel. Under normal circumstances this never occurs, but when a blood vessel is injured or diseased clotting sometimes takes place. Any part of the body may be the site of a thrombosis, and the symptoms will naturally depend on the organ involved. If the clot moves from its original position and is carried by the blood stream to some other site it is known as an *embolism*.

Thyrotoxicosis.

A disease due to overaction of the thyroid gland. (See GOITRE.)

Tonsillitis.

The tonsils are two small masses of tissue which lie one on either side of the back of the throat (*see* FIG. 1, page 27). They are a part of the lymphatic system of the body (*see* under GLAND), and they help to remove germs which gain entry to the body through the mouth. It is not surprising that they are quite frequently attacked by germs themselves, and the resulting inflammation is known as *tonsillitis*. The first symptoms is usually some soreness of the throat, and if this is examined under a light it will be seen to be red and inflamed. The temperature rises, the patient feels generally unwell, and often has some headache. As the condition progresses, the tonsils become swollen; and often they can be seen to have little beads of pus, or matter, on their surface. The patient should be treated in bed and be kept warm. A light diet containing plenty of fluid is required—especially since swallowing is often painful. Many of the germs which cause tonsillitis are sensitive to the sulphonamide (M & B)

drugs and to penicillin, and if this is the case your doctor will be able to hasten recovery by prescribing them. In some cases, especially in children, attacks of tonsillitis become very frequent and when this happens the tonsils are often best removed by operation (*see also* ADENOIDS). A doctor should always be called to see any child who has a sore throat and a temperature. The symptoms of diphtheria may be very similar to those of tonsillitis, and if this disease is neglected the consequences are liable to be very serious.

Toothache.

This is most often due to dental decay which causes a cavity to form in a tooth. The correct treatment, of course, is to see your dentist without delay; but sometimes delay is unavoidable and temporary relief is required. Nothing is completely effective in suppressing a severe toothache, but one of the following may often bring some relief. Up to three aspirins may be taken in a little water. The mouth should be well rinsed with very hot water, as hot as one can bear it, and this should be swilled particularly around the aching area. Alcohol will sometimes bring relief, and a small piece of cotton wool may be soaked in neat whisky and applied to the aching tooth. Clove oil is often effective, and may be applied in the same way if it is available. Cold foods or drink should be avoided, and one should also avoid biting on the affected tooth until after it has been properly treated.

Toxin.

The medical name for the poison produced by a germ, to which most of the harmful effects of the germ are often due. When it is invaded by germs the body can often produce

an *antitoxin* which will neutralise the toxin; and the basis of serum treatment, which is used in a number of diseases, is to supply the correct antitoxin artificially. When the body is being poisoned by a particular toxin the condition is spoken of as *toxaemia*.

Tuberculosis.

This disease is caused by a specific germ—the tubercle bacillus. This germ lives within a special protecting membrane, and is very difficult to kill, so that usually the infection is a chronic one. Any part of the body may be attacked by tuberculosis, but the most common site for the infection is in the lungs—the condition of *pulmonary tuberculosis* or consumption. The germs are spread by persons who have the disease, and after being breathed in, they settle in the lung where they multiply. Tuberculosis causes a breaking down of the normal lung tissue, so that a cavity may form; and if the disease is not properly treated, the condition may gradually spread until a large part of the lungs is involved. It should be clearly realised that pulmonary tuberculosis *can* be cured, but that the cure takes some time, and that the earlier treatment is started the more certain and more speedy the cure will be. In the early stages the disease may be very insidious. There is nearly always some cough, and often a little sputum is brought up. The patient generally feels below “par”, and usually loses weight, becoming progressively thinner. The temperature may be raised so that the patient feels hot and may sweat, particularly in the evenings and at night. If the pleura is involved (see PLEURISY) there may be some pain in the chest, and a very suggestive symptom, which is sometimes the first, is the coughing up of bright, red, frothy blood. If any of these symptoms should occur,

medical advice must always be sought. Similar symptoms often occur due to other less serious causes, but one cannot afford to delay. If he is suspicious of tuberculosis your doctor will probably order an X-ray which will settle the matter. You may be unlucky and have the disease, but from another point of view you will be very lucky to have it discovered at an early stage in which treatment carries every chance of success. Delay may make all the difference between complete recovery and permanent ill health. The treatment of pulmonary tuberculosis can largely be summed up in one word—rest. The body must be rested so that it can build up its resistance, and use its energies to fight the disease; and the lung itself must be rested to help it to heal. Treatment is best carried out in a special sanatorium, but owing to a shortage of accommodation the patient will often have to start treatment at home. Usually complete rest in bed, with plenty of food and fresh air are the chief measures prescribed. This may seem tedious, and not very dramatic, but experience has shown it to be most valuable. In treating the lung itself other measures may be used. The lung may be collapsed by inserting air into the chest (see PNEUMOTHORAX); or sometimes the nerve which works the breathing muscles on the affected side is put out of commission for a time. More serious operations to collapse the whole chest, or even to remove a part of the lung are sometimes advised, and often bring good results.

The symptoms of tuberculosis elsewhere will depend chiefly on the site, but in the early stages the general symptoms—loss of weight, fever and feeling “run-down”—are often the same. The bones or joints are often affected in children, and in this case the germ is often spread in milk. That is why it is always best to give

young children nothing but pasteurised or boiled milk. In the fight against tuberculosis in general, it is hoped that we will be able to discover something like penicillin, or M & B, which will kill the germs themselves. Already *Streptomycin*, which is similar in some ways to penicillin, has been found to be effective in certain types of tuberculosis (see MENINGITIS); and other chemicals are on trial. Tuberculosis is one of the greatest scourges of civilisation, but perhaps in a few years we may look forward to finding a really effective cure.

Tumour.

This is the medical name for a lump or swelling. Many patients become alarmed if they hear their doctor speaking of a tumour, since tumours are a common symptom of cancer. It should be realised that the word simply means "lump", and that very many tumours are quite unrelated to cancer, and are quite innocent.

U

Undescended Testicle.

The testicle, or male sex organ, normally lies within the abdominal cavity before birth. By the time the male baby is born, however, it should have moved down to occupy its proper position within a special sac of skin, the scrotum. Sometimes one or both of the organs may fail to do this, and the condition is then known as an undescended testicle. Unless the testicle occupies its normal position it cannot function properly. Sometimes it can be made to descend by means of glandular treatment, but often a small operation is necessary in order to bring it down.

Uraemia.

The name given to a serious condition which occurs in severe kidney disease. The word is derived from "urine" and "-aemia" and means "urine in the blood". The condition occurs when the kidneys are no longer capable of filtering the poisonous waste products from the blood stream.

V

Vaccination.

A means of protecting against smallpox by introducing germs into the body through a scratch on the skin. (*See* SMALLPOX.)

Vagina.

The female passage. An inflammation of the vagina is known as *vaginitis*, and is usually accompanied by a discharge. (*See* LEUCORRHOEA.)

Varicocoele.

The name given to a collection of dilated blood vessels on the scrotum. The condition is similar to varicose veins (*see below*), and is usually not at all serious. Sometimes a varicocoele will cause aching and discomfort, in which case it can be removed by a small operation, or a suspensory bandage will sometimes meet the case.

Varicose Veins.

The blood which circulates to the legs returns to the heart in thin walled blood vessels. Some of these vessels, or veins, run just beneath the skin, and they contain valves which prevent the blood from running down again into the leg. Towards middle age these valves often become weakened, and this means that the walls of the veins have to bear an increased pressure. In consequence the veins become swollen and twisted—the condition known as *varicose veins*. If the condition is left untreated, and becomes severe, the nourishment of the skin by fresh blood

is interfered with, and an ulcer may break out (*a varicose ulcer*) which is very difficult to heal. In their early stages, varicose veins can often be treated by injection, which is very simple. About once a week a small injection is made, which gradually causes the vein to shrivel up and disappear. In more severe cases injection may not be sufficient, and an operation will be required to tie the veins at the top of the leg. If a varicose ulcer has developed, it is essential that the veins should receive proper treatment; and in addition the leg will need to be rested for some time while the ulcer heals. As with so many diseases, the earlier treatment for varicose veins can be started the easier they are to cure.

Virus.

Many of the germs which cause disease in man, although very small, can be seen under a powerful microscope. There is one group, however, in which the germs are so small that they cannot be seen at all. These are known as *viruses*. Their existence was deduced by conveying disease by means of fluid from which all ordinary germs had been filtered out. Recently it has been possible to photograph them by a special apparatus which does not depend on visible light—the electron microscope.

Vitamin.

The vitamins are complex chemical substances, which are required in small quantities to keep the body healthy. They are commonly known by letters of the alphabet. For further information see page 13.

Vomiting.

Vomiting, or sickness, is brought about by a contraction

of the stomach muscles which empties the stomach of its contents.

The most common cause is irritation of the stomach by unsuitable or excessive amounts of food. Under these circumstances vomiting serves to protect the system from the unpleasant effects that might follow if the offending material were not eliminated. Common examples of this type of vomiting are for instance the eating of green apples by children, or the consumption of too much alcohol by adults. Many types of *poisoning* result in vomiting, and sometimes the condition is associated with actual disease of the stomach or intestines, for example GASTRIC or DUODENAL ULCER. The act of vomiting is controlled by a definite part of the brain, and if this becomes irritated, sickness may occur without the stomach itself being irritated in any way. This type of vomiting is seen in MIGRAINE and sometimes in certain diseases of the nervous system such as MENINGITIS. The vomiting in SEA-SICKNESS is also due to reflex irritation of the "vomiting centre".

In the treatment of vomiting it should be remembered that children tend to vomit much more readily than adults. If there is some definite cause (e.g. too much to drink) then the sickness will pass off and need not cause alarm. Vomiting which occurs for no apparent reason, which persists or which is accompanied by much pain should be taken as a danger signal for which medical advice is required. For the treatment of a simple upset stomach see the article on ACIDOSIS.

W

Warts.

These are small, hard outgrowths from the skin. They most commonly occur on the hands, but are sometimes seen on other parts of the body. They are mildly contagious, and may spread from one part to another on the same person, or spread from one person to another. The exact cause of warts is not known, but they may be due to an infection of the skin by a virus. Warts sometimes disappear by themselves, but because of the danger of spreading they are best treated. Strong acid will often get rid of them and glacial acetic acid may be applied carefully every day. The acid must not be allowed to come in contact with the normal skin or it will cause a burn. Another method of treating warts is to freeze them with carbon di-oxide: "snow".

Wax.

A little soft wax is normally produced in the canal which leads down to the ear drum. Some ears produce more wax than others, and if the wax accumulates it becomes dry and hard and may interfere with hearing or cause irritation of the ear itself. It can be removed by your doctor by syringing with warm water, and for those who produce an excess of wax it is best to attend fairly regularly to have this done. It saves time and trouble in the long run, for wax which has accumulated for a long time can be very difficult to get out. Proper syringing requires patience and skill, and it is not wise to try to remove the wax one-

self, either by syringing or poking things into the ear, since the delicate ear drum may easily be damaged.

White Leg.

The popular name for a condition which sometimes occurs in women after confinement. It is due to a blood clot in the circulation of the leg (*see* THROMBOSIS,) and the limb becomes white, swollen and often painful. The condition may call for a considerable period of rest in bed.

Whitlow.

An infection of the finger in which the nail base is involved. (*See* FINGER, SEPTIC.)

Whooping Cough.

An infectious illness, usually occurring in children, caused by a bacillus. The disease often occurs in epidemics in the winter months among school children. A second attack is very unusual, but older children or adults, who have escaped infection earlier, sometimes catch the disease. The germs of the disease are spread through the air, and the incubation period (*see* under QUARANTINE) is usually about a fortnight. The early symptoms resemble those of a "cold", but continue longer with a gradually increasing cough. The characteristic "whoops" do not usually develop for about ten days or longer. There is a severe attack of coughing which the child is unable to control; the face may become blue, and finally the breath is drawn in with a crowing sound. These attacks occur a variable number of times a day, depending on the severity of the infection, and are often troublesome at night. They are not infrequently followed by vomiting. This stage of the disease may last for weeks, or even months, but gradually

the attacks become less frequent and finally they cease. The child should be kept at an even temperature, and in bed, during the early stages of the illness, when there is usually some fever. The temperature has usually returned to normal by the time the "whooping" starts, and there is no harm in allowing the child up at this stage. He should avoid cold air and any great exertion, however, as these tend to make the coughing worse. The attacks are very difficult to control, but medicines which can be prescribed by your doctor will often help. Vaccine treatment is also of value in some cases. Often the child becomes very run down after a bad attack of whooping cough, so that a holiday by the sea is sometimes recommended. Ideally the child should be isolated until the cough has completely gone; but the most infectious period of the disease is the early stage before the whoop develops, so that probably little harm is done if the patient mixes with others in the later stages. Vaccination can be carried out against whooping cough, though opinions differ as to the value of this. Whooping cough vaccination can be combined with diphtheria immunisation in the same injection; and since there is no doubt at all that every child ought to be protected against diphtheria, I always feel that it is worth while doing both at once, since this involves no extra trouble.

Worms.

Various types of worm can inhabit the human body. They are usually eaten with the food in the form of worm-eggs, and they hatch out within the digestive tract where they live on their host's food. Worm infestation seldom causes serious symptoms; but the parasites may take a considerable proportion of the nourishment from the

intestines, and may disturb the general health, and cause such side effects as anaemia or loss of weight. One of the most common worms in this country is the *thread worm*, which usually affects children. It appears in the stools from time to time, where it resembles small pieces of white thread. It may cause the child considerable irritation, particularly at night, since the worms come out onto the buttocks to lay their eggs. The irritation is sometimes a cause of bed-wetting. Threadworms can usually be cured fairly easily by appropriate medicines, but reinfection either from the same patient or from other children must be guarded against. There are other types of worm, round worms and tape worms, which may infest man, but they are not common in this country. Any persistent itching round the buttocks in a child, or the appearance of worms in the stools at any time should be reported to your doctor.

X

X-Rays.

X-rays are invisible to the eye, though they resemble light rays in many ways. They have, however, a much greater power of penetration than light; and in the same way that light will pass through glass, X-rays will pass through the tissues of the body. In common with light rays, X-rays have the power of changing a photographic plate, and this property makes them extremely useful in medicine. By shining X-rays through a part of the body we can take a photograph of the shadows they cast, and X-ray photographs may reveal a great number of internal disorders which cannot otherwise be seen. Apart from the discovery of disease, or diagnosis, X-rays are also useful in treating a number of conditions. In small doses the rays may stimulate the cells of the body, so that X-ray treatment may be useful in cases where healing is delayed, for instance in a chronic ulcer. In larger doses the rays damage, and may kill the cells, and this type of treatment may be very useful in some cases of cancer, or in certain blood diseases.

APPENDIX I

THE NATIONAL HEALTH SERVICE

A SMALL proportion of your contributions to the National Insurance Scheme is allocated to the National Health Service, which is available to all, *without question of insurance qualifications*. The service, financed from these contributions, taxes and local rates, is administered by the Ministry of Health (Department of Health in Scotland), and provides for: medical, hospital, dental and eye treatment and advice, and includes the provision of dentures, spectacles, and other appliances, specialist opinions and treatment, maternity and child welfare, blood transfusion and pathological laboratory services at all hospitals, and the dispensing of prescriptions at chemists, hospitals or surgeries. The only charge for which the sick patient is liable is, in certain cases, for renewal or repair of dentures and spectacles, domestic help, extra food, blankets, etc.

There are three main division of the service:

Hospital: Specialist facilities form part of this service, which includes general and special hospitals, maternity accommodation, tuberculosis sanatoria, infectious disease units, provision for the chronic sick, mental hospitals and mental deficiency institutions, accommodation for convalescent hospital treatment and medical rehabilitation, together with all forms of specialised treatment, such as plastic surgery, cancer, orthopaedic and ear, nose and throat treatment.

Specialists. Specialists and Consultants may take up whole or part time service, and on the latter basis may also accept paying patients.

Small ward or single room accommodation is provided in certain hospitals, which, when available, may be placed at the disposal of patients desiring them as an amenity. In this case a charge is made only for the additional cost of maintenance as compared with a general ward; there is no charge for treatment or normal maintenance.

Pay-beds are at the disposal of specialists, in some hospitals, for use by private patients paying full maintenance costs as well as private fees. Normally there is a maximum fee chargeable by the specialist in such cases, but in some instances these charges are not limited.

Specialist services and advice are obtainable through the family doctor, and the patient is usually seen at a hospital or clinic, but if necessary on medical grounds, the consultation may take place at the patient's home.

A patient has the right to become the private fee-paying patient of a specialist.

Doctors. All doctors were entitled to take part in the Family Doctor Service (organised by Executive Councils) in the areas where they practised before 5th July, 1948. They may also have private, paying patients. Remuneration is by (1) Capitation fee alone, or (2) an annual payment plus a lower capitation fee—with the consent of the Executive Council. The consent of the Medical Practices Committee is necessary for a doctor wishing to take up public practice. Everyone has the right to choose or change his doctor.

General Dental Service. Dentists, also, are free to serve

whole or part-time and to have private patients. Registration with a particular dentist is not necessary, and patients may attend any dentist who will accept them, in or out of their area, if he is taking part in the Service.

Normal conservative treatment (e.g. fillings), emergency treatment and ordinary denture repairs do not require a dental form or prior authority, which, however, the dentist must obtain from the Dental Estimates Board for treatment involving the removal of teeth, necessitating replacement by dentures; the provision of dentures; extensive and prolonged treatment of the gums, gold fillings, inlays, crowns, special appliances and oral surgery. Extra may be charged for more expensive treatment or appliances than clinically necessary, at the patient's wish and with the Board's approval. Owing to the shortage of dentists, there may be a waiting period for dental treatment; expectant mothers and young people have priority.

Supplementary Eye Service. Until a hospital eye service is built up, supplementary arrangements have been made for ophthalmic opticians to test sight, and for ophthalmic and dispensing opticians to supply glasses.

Local Service. The Local Health Authorities are responsible for Health Centre facilities (communal surgeries and consulting rooms), midwifery, ante- and post-natal clinics, the provision of fruit juices and cod liver oil, dental services for expectant and nursing mothers and young children, health visiting, home nursing, ambulances, domestic help on health grounds, special care and after-care of the sick, vaccination and immunisation, and local mental health services.

COST OF SERVICE

It is estimated that during the first nine months of operation, the total expenditure on the Service in England and Wales would be about £180,000,000. Of this, nearly £4,000,000 would come from Rates, £24,000,000 from the National Insurance Fund contributions, and about £132,000,000 in other ways from the tax-payer.

*The particulars given in Appendix I and Appendix II are those applicable to the year 1949 when this book was first published and must not be taken as an interpretation of the Law.

APPENDIX II

THE NATIONAL INSURANCE SCHEME

In return for regular weekly contributions, cash benefits are provided during sickness, injury, unemployment and widowhood, payments at childbirth and at death, and pensions for industrial disablement and on retirement from regular work. It is compulsory, and took the place on the 5th July, 1948, of the previous Unemployment Insurance, National Health and Contributory Pension Schemes, and the Workmen's Compensation Acts. The money comes partly from weekly contributions by insured people and employers and partly from taxes. The Employer's contribution is normally regarded as a business cost and is added to the price of his products.

Contributors: In general, everyone over school-leaving age, living in Great Britain.

- Class 1. Employed persons, that is, those working for wages or salary or as paid apprentices.
- Class 2. Self-employed persons; those in business on their own account or working for gain but not under an employer.
- Class 3. Non-employed persons; everyone who is not in Class 1 or 2.

Exceptions:

(a) Married women engaged only on their own home duties, unless already insured for pensions and wishing to

continue. Otherwise, married women are provided for under the husband's contributions; the husband's Sickness or Unemployment Benefit is increased for his wife, his contributions provide maternity and widowhood benefits, and his Retirement Pension is increased if his wife is under 60. If over 60 she has her own Retirement Pension.

(b) Men who, on 5th July, 1948, were aged 65 or over (60 in the case of women)—except for Industrial Injury Insurance during employment.

(c) Women who are insured under the scheme when they marry who then elect to stop paying contributions—except for Industrial Injuries Insurance during employment.

(d) Widows receiving one of the widow's benefits of the scheme (other than a basic widow's pension of 10s. a week)—except for Industrial Injuries Insurance during employment, unless they choose to pay the full contribution while working.

Contributions: These must generally be paid each week, according to insurance class. For Class 1 they include Industrial Injury Insurance, which replaced Workmen's Compensation. Contributions are paid by single National Insurance stamps from a Post Office. Cards are obtainable from an Employment Exchange.

In Class 1, the employer must see that contributions are paid, but can deduct the employee's share from wages.

Class 2 and 3 stamp their own cards.

Exemptions: For whole weeks for which benefit is received for sickness, unemployment, injury or maternity, or if under 18 years of age and still at school. (There are also other exemptions.) For the weeks when contributions are

not paid 'because of receipt of benefit and in certain other circumstances "credits" will usually be given, which will count as contributions for some purposes. Gaps in the contribution record may affect the right to benefit or pension; credits help to fill these gaps.

Self-employed or non-employed persons with a total income of less than £104 a year can claim exception on that ground, but may lose benefits if they do so. Details from the local National Insurance Office.

Benefits:

Sickness; unemployment; maternity (maternity grant, maternity allowance, attendance allowance); guardian's allowance; retirement pension; death grant; widow's benefit (widow's allowance, widowed mother's allowance, widow's pension); industrial injury benefits (injury, disablement and death benefits).

The benefits for which you are covered will depend on the class of contributions paid:

Class 1. All National Insurance Benefits.

Class 2. All except Unemployment and Industrial Injury.

Class 3. All except Sickness, Unemployment and Industrial Injury Benefits, and Maternity Allowance.

The National Insurance Number must be quoted when claiming.

Contribution Conditions for Benefit:

1. Before *any* benefit can be received a certain number of contributions must have been *paid*.

2. Before *full* benefit can be received a certain number of contributions must have been paid or "credited" over a specified period.

For Guardian's Allowance and Industrial Injury Benefits there are *no* contribution conditions.

For Contribution conditions for each benefit refer to the particular benefits described later, but understand first what is meant by "Contribution Year" and "Benefit Year":

Contribution Year: Under the State insurance schemes the contribution year for all insured persons was the same, July to July, when contribution cards were exchanged. There are now four different contribution years, from different dates, a quarter of all cards being exchanged every three months. The first new cards end in the first weeks in March, June, September or December 1949. Your contribution year depends on the date your first new card ends; it runs yearly from that date.

Benefit Year: Your benefit year is a period of twelve months starting about five months after the end of your contribution year. Your rate of Sickness or Unemployment Benefit during a benefit year depends upon the contributions paid or credited during your previous contribution year.

Newly insured persons claiming Sickness or Unemployment Benefit will be helped to satisfy the second contribution condition only, by "credits" for weeks before their insurance started.

To claim benefit for sickness or injury, obtain a medical certificate from your doctor the first time he sees you. Fill

in both sides and post or take it *at once* to your National Insurance Office. If written notice is not sent within three days, you may lose benefit. Further certificates must be sent, usually weekly, during period of sickness or injury.

To claim unemployment benefit, take your contribution card to the Employment Exchange *at once*, register for employment, and make a claim. Any delay may mean loss of benefit.

For maternity benefit, you should, eight weeks before the baby is expected, obtain from your National Insurance Office or Maternity Clinic a claim form which will include a certificate to be completed by your doctor or midwife.

For persons claiming retirement pension or widow's benefit, forms are available at the Post Office and the local National Insurance Office.

Your National Insurance Number, which appears on the first page of your contribution card, must be quoted whenever benefit is claimed. If your card is held by your employer, he will give you the number, of which you must make a careful note.

The most convenient way of receiving Sickness Benefit, Maternity Grant, Death Grant and Injury Benefit, is by an order to be cashed at a Post Office by you or someone on your behalf. If preferred, it may be paid in cash at your National Insurance Office.

If for any reason you want arrangements made for benefit to be brought to your home, you should explain the position to the local office.

Unemployment Benefit is payable in cash at your Employment Exchange, unless you live at a distance, when it may be paid by post.

For Retirement and Disablement Pensions, all Widow's Benefits, Maternity and Attendance Allowances and Guardian's Allowances, you will be given a book of Orders, one of which may be cashed each week by taking the book to the Post Office you have named.

The National Insurance Schemes do not cover death or injury in war, nor, generally, can anyone qualify for more than one benefit or pension at the same time. With so many different benefits and payments to be taken into account, the rules about double payment are too complicated to be given here, but full information will be given if the rules affect any claim you make.

Your claim to benefit will be decided by an Insurance Officer appointed by the Minister of National Insurance, and if dissatisfied with his decision you may appeal to an independent Local Appeal Tribunal. In some cases you may appeal further to the Commissioner appointed by the Crown. The Commissioner's decision will be final.

Medical questions on disablement benefit under the Industrial Injury Scheme will be decided by Medical Boards, but there will be a right to appeal to a Medical Appeal Tribunal.

Contribution questions will be decided by the Minister, with a right of appeal on points of law to the High Court (Court of Session in Scotland).

How Income Tax affects Contributions and Benefits.

Contributions: You get an allowance from income tax for all the contributions you pay except the contributions for Industrial Injury Insurance. If tax is deducted from your pay under "Pay as You Earn", the Tax Tables will automatically give you the allowances and you need do nothing about it. Married women are an exception to

this rule. * They can pay contributions or not, as they wish, and must therefore claim the allowance in appropriate cases. In other cases the tax office will give you the allowance when they deal with your income tax.

Benefits: The benefits you get (except Maternity Grant, Death Grant, and Industrial Injury Benefits) must be included in your income tax return. No tax will be deducted from any of the benefits or payments, but any taxable benefits you receive will have to be added to your other income when your income tax is assessed.

All enquiries about taxation should be made to your Tax Office, not to your National Insurance Office.

Married Women: A married woman who contributes will, if qualified, be able to draw Sickness and Unemployment Benefit, even though her husband is working, but at special rates.

A married woman contributor will also be able to qualify for Retirement Pension from the age of 60 at the full rate, whether her husband is retired or not.

Married women in Class 1 employment will be compulsorily insured for Industrial Injury, even though they choose not to insure for other benefits.

It is essential that all insured women who marry, and all women who become widows, should at once notify their local National Insurance Office.

NATIONAL INSURANCE BENEFITS EXPLAINED

In this and the next section, more information is given about individual benefits and their conditions. Some detail and special conditions have had to be omitted, but in case of doubt always consult your National Insurance Office.

Sickness Benefit:

Rates of Benefit:* The standard weekly rate for a man or woman over 18 years of age (except a married woman) is 26s. with an increase of 16s. for an adult dependant and 7s. 6d. for the first child under school leaving age. Children, after the first, are covered by the Family Allowances Scheme.

The weekly rate for a boy or girl under 18 is 15s., but any boy or girl who is entitled to an increase for an adult or child dependant will be paid the adult rate

The weekly rate for an insured married woman over 18 is 16s., but she will be paid at the 26s. rate if she has an invalid husband who is dependent on her, or if she is not living with and cannot get financial support from her husband.

Payment of benefit for odd days is at one-sixth the weekly rate, Sundays being left out of account.

Lower rates of benefit may be paid after you have been in hospital for some time.

To qualify for any Sickness Benefit, you must have paid 26 Class 1 or Class 2 contributions at some time. The standard rate of benefit is payable during a benefit year if in the previous contribution year you paid or have had credited at least 50 Class 1 or Class 2 contributions. If less than 50, benefit may still be payable, but at a reduced rate. Until 156 Class 1 or Class 2 contributions have been paid, Sickness Benefit is not allowed for more than 312 days in any one spell (that is, one year not counting Sundays). After drawing it for this time you cannot receive it again until you have been back at work for 13 weeks or more.

* See end of Appendix.

Contributions paid under the previous National Health Insurance Scheme will count towards those needed to qualify for Sickness Benefit. If 104 contributions were paid under the old Scheme, they will count as 156 under the present Scheme.

Similarly, your record of contributions paid or credited under the previous Scheme will affect your rate of benefit in the first months of the present Scheme.

Once 156 Class 1 or 2 contributions have been paid, Sickness Benefit is payable, if necessary, until pension age, if you are incapable of work through disease or disablement.

Benefit will not be paid for the first three days of sickness or unemployment unless you are sick or unemployed for at least 12 days during the period of 13 weeks from the first of the three days. These 12 days need not follow one after the other; any two days may be counted if they are less than a week apart. No fresh waiting period is necessary on a later claim unless more than 13 weeks have passed since the end of your last spell of sickness or unemployment.

Unemployment Benefit.

The rates of benefit are the same as for sickness, except that the standard rate for an insured married woman is 20/- instead of 16/- per week.

To satisfy the contribution conditions for unemployment benefit you must have paid 26 Class 1 contributions at some time. The full rate of benefit is payable during a benefit year if in the relevant contribution year you have paid or had credited 50 Class 1 contributions. If the

number is less than 50, benefit may be paid*but at a reduced rate.

Until your first normal benefit year begins (*see* page 227) there will be special contribution conditions which will enable persons insured under the old Unemployment Insurance Scheme to qualify under substantially the same conditions as before 5th July, 1948.

Standard unemployment benefit is exhausted after 180 days in one spell, plus added days, reckoned on your record of benefit drawn as against contributions paid in recent years. Up to a total of 310 days in all may thus be paid in one spell. Benefit is not payable for the first three days except as shown for Sickness Benefit.

When you have exhausted standard benefit you cannot again become entitled to it until you have paid another 13 Class 1 contributions. If, however, you have not re-qualified but continue to satisfy all the other conditions for benefit, you may be paid extended unemployment benefit on the recommendation of a Local Tribunal, who will take into account your circumstances in relation to the industrial conditions of your district.

The most important of the other conditions for the receipt of unemployment benefit on any day are:

- (1) You must be capable of and available for work in an employed persons employment.
- (2) You must not receive wages, or compensation for their loss which is substantially equivalent to the wages themselves. You may follow a spare time occupation if you do not spend more time than you could outside your normal working hours and do not earn more than $3/4d.$ a day.
- (3) With certain exceptions you must not be on holiday.

(4) You must avoid disqualifications, for example: leaving your job without just cause; losing it through industrial misconduct; refusing suitable employment or training, or failing to take reasonable steps to get a suitable job when told about it. You may also be disqualified if you lose employment through a trade dispute, that is, a strike or a lock out with which you are connected.

(5) You must claim benefit in the proper manner.

Maternity Benefit:

The mother receives a Maternity Grant of £4 for each baby born. This may be paid on either her own insurance or her husband's, but not both.

To qualify, either the mother or her husband must have paid 26 contributions since entering insurance and must have at least 26 contributions paid or credited in the previous contribution year. Contributions under the previous Health Insurance Scheme count.

Maternity Allowance is paid (in addition to Maternity Grant) to employed or self-employed women who give up their paid work for the period for which the Allowance is made.

The rate of benefit is 36s. a week,* normally payable from a date six weeks before the expected confinement, ordinarily for a period of 13 weeks.

To qualify, the mother must have been at work for at least half of the previous 52 weeks. Also, in at least 45 of these weeks she must have been at work, or registered as unemployed or sick. A married woman with this employment record can get the Allowance even though she has chosen not to pay contributions.

* See end of Appendix.

Attendance Allowance is paid to those women not entitled to Maternity Allowance; both cannot be drawn.

The rate of benefit is 20s. a week* for the four weeks after the baby is born. It is paid in addition to the Maternity Grant, either on the mother's insurance or on her husband's. The qualifications are the same as for Maternity Grant.

Widow's Benefit:

There are three kinds of Widow's Benefit, all based upon the husband's contributions only. The contribution conditions which must have been satisfied by the husband are, in general, the same as those for Retirement Pension.

Unless the widow is already a retirement pensioner, she will usually get an allowance of 36s. a week* for 13 weeks, with an extra 7s. 6d. a week for the first child under school-leaving age.

The allowance will not be paid if the widow is over 60 and her husband was a retirement pensioner.

If a widow has a child under school-leaving age, she will receive a Widowed Mother's Allowance when she has finished drawing her Widow's Allowance. The Widowed Mother's Allowance is at the rate of 33s. 6d. a week for the mother and child together, and lasts so long as the child is under school-leaving age.

A widow may get a Widow's Pension at the rate of 26s. a week in any of the following ways:

(a) When Widow's Allowance ends, if she was over 50 when her husband died and had been married for ten years.

(b) When Widowed Mother's Allowance ends, if she is

* See end of Appendix.

then over¹ 40 and ten years have passed since the date of her marriage.

(c) If, at the time when either Widow's Allowance or Widowed Mother's Allowance ends, she is unable to support herself because of some mental or bodily infirmity which is likely to remain with her for a long time.

If the widow is working, the Widowed Mother's Allowance or Widow's Pension will be reduced by 1s. for every 1s. she earns above 30s. in any week, but not below 15s. a week in the case of Widowed Mother's Allowance, or 10s. in the case of Widow's Pension, if her deceased husband married her before the start of the new scheme on the 5th July, 1948, and was insured under the old Contributory Pensions Act immediately before that date.

Widows aged 60 or over get Retirement Pension instead of Widow's Pension.

A woman married to a man insured under the previous scheme of Contributory Pensions usually qualifies on his death, according to her circumstances, for a Widow's or Widowed Mother's Allowance or a Widow's Pension under the present scheme, or, failing these, for a 10s. pension as under the previous scheme.

Guardian's Allowance:

If both parents of a child are dead, and at least one of them was insured, anyone having the child in his family may qualify for a Guardian's Allowance at the rate of 12s. a week, but not for Family Allowance. There are no conditions, except that the child must be in the family of the guardian and must be under school-leaving age.

* See end of Appendix.

This replaces the previous Orphan's Pension* of 7s 6d. a week if the orphan was in a family.

Retirement Pension:

An insured man aged 65 or over, or an insured woman aged 60 or over, retired from regular employment and satisfying certain conditions explained later, may qualify. The wife of a retirement pensioner, even though herself uninsured, may qualify for her own pension at 60 if she is retired.

The standard weekly rate of Retirement Pension is 26s;* for a married woman whose title depends on her husband's insurance, the rate is 16s., increased to 26s. if she becomes a widow.

An increase of 16s. is payable to a retirement pensioner having a dependant wife under 60; and 7s. 6d. for one child under school-leaving age.

The conditions are that 156 contributions must have been paid, with a yearly average of 50. Where the average is less, pension may still be paid, but at a reduced rate.

Retirement does not imply that no paid work may be done. Not more than 12 hours a week must be worked, or more than a quarter of the normal hours of a full working week, in the particular occupation, whichever is more favourable to the claimant.

A married woman is deemed retired if she does no work outside her own home duties.

It is still possible to claim Unemployment and Sickness Benefits up to the age of 70 (65 for women), and also earn a higher rate of pension at that age, or if retiring before. For every 25 contributions paid as an employed or self-

* See end of Appendix.

employed person during the five years after reaching pension age, Retirement Pension will be increased by 1s. a week. The rate of a wife's Retirement Pension is increased in the same way for the contributions paid by the husband while both are over pension age.

At 70 (65 for women), the full rate of Retirement Pension then earned will be paid, even though the Pensioner remain at work.

These arrangements do not apply to people already over pension age on 5th July 1948, nor to certain late-age entrants to the Scheme.

Contributions* are not paid by retirement pensioners except in Class 1 employment, when they pay 4d. a week (3d. for women) for Industrial Injury Insurance, and the employer pays his usual contribution. The Retirement Pension of a man under 70 or a woman under 65 is reduced by 1s. for every 1s. earned above 20s. in any week. Over these ages there is no reduction because of earnings.

A claim may be made at the National Insurance Office four months before pension age. Even though intending to continue work, a preliminary claim should be made at that time, as Sickness and Unemployment Benefits are only paid after pension age to those whose right to pension when they retire has been proved. The preliminary claim also enables pension to be paid promptly after notice of retirement later on.

Those who entered Old Age Pensions Insurance under the previous Scheme before 30th September, 1946, must wait five years from their entry before being eligible for pension. Those who entered that scheme on or after 30th September 1946 and those who first became insured

* See end of Appendix.

when the present Scheme started on 5th July, 1948, must wait ten years from their entry.

If at the age of 65 (60 for women) the qualifying period is not complete, you can choose between:

- (a) paying Class 3 contributions until you complete the qualifying period.
- (b) claiming a refund, with interest, upon that part of your contributions which was paid for Retirement Pension, in which case you will lose all right to that pension.

If later you are in Class 1 employment in any week, you will pay only the Industrial Injury Contribution, and if you did not claim a refund of contributions at 65 (60 for women) the contribution which your employer also has to pay for that week will count as your Class 3 contribution to qualify you for pension.

Non-Contributory Pensions:

The special Scheme for Non-Contributory Pensions for Blind Persons over the age of 40 and Old Age Pensions for those men and women over 70 who have no retirement pensions continues to be dealt with by the Area Officer of the National Assistance Board.

Death Grant:

On the death of an insured person, or on the death of the wife, widow, husband, or child of an insured person, a Death Grant will be paid towards the cost of funeral expenses. The Grant is £20 when an adult dies, and a smaller sum when a child dies.

No Grants are payable for deaths before 5th July, 1949,

or for deaths of persons already over pension age (65 for men, 60 for women) on 5th July, 1948, or of children born before 5th July, 1948, if they die before they are ten years old.

Reduced Grants will be paid for the deaths of people who, on 5th July, 1948, were over 55 (men) or over 50 (women).

INDUSTRIAL INJURY BENEFITS EXPLAINED

Industrial Injury Insurance takes the place of the Workmen's Compensation Acts and provides insurance against being incapable of work, or being disabled, or losing life, because of accident at work or certain industrial diseases. It covers everyone in Class 1 of the National Insurance Scheme. Certain other employments not in Class 1 are also covered by the Industrial Injury Scheme (*see* Leaflet N.I.5 from your National Insurance office.)

The right to benefit does not depend on the number of contributions paid.

Benefit is payable when an insured person becomes incapable of work either by personal injury by accident "arising out of and in the course of his employment", or by contracting one of the prescribed diseases due to the nature of his employment. (*See* special leaflet N.I.2 from your local National Insurance Office.)

The Scheme does not apply if the accident happened (or the disease developed) before 5th July, 1948. The Workmen's Compensation Acts continue to apply to such cases, but anyone who, on or after 5th July, 1948, was entitled to weekly payments of Workmen's Compensation may claim Unemployability Supplement or Constant Attendance Allowance

If you are injured at work, you, or somebody for you, should at once tell your employer, or someone who acts for him. If an Accident Book is kept, an entry in it will be enough.

There are three types of benefit: Injury, Disablement and Death.

Injury: For a person aged 18 and over who is incapable of work as the result of industrial accident or disease, Injury Benefit is payable at the rate of 45s. a week. The rate is reduced for a person under age 18 without dependants. It is paid for a maximum period of 26 weeks from the date of the accident.

Injury Benefit is claimed in the same way as Sickness Benefit.

The allowances for an adult dependant and child are the same as for Sickness Benefit.

Benefit for the day of the accident and the next two days will not be paid unless you are unable to work for 12 days or more because of it. There are special rules where a second industrial injury, or sickness, or unemployment, follows within 13 weeks, to link it up with the earlier industrial injury.

Disablement Benefit is payable in respect of any disablement you may still have after Injury Benefit ceases. It will continue to be payable even though you work. The amount of benefit depends on the extent of the disablement as assessed by a Medical Board and *not* on your earnings before the accident. It varies from 45s. a week for 100 per cent disablement to 9s. a week for 20 per cent disablement. For an assessment of less than 20 per cent a gratuity will be paid, ranging from £15 to £150.

Disablement benefit may be claimed on any day before

the expiry of 26 weeks, on which the claimant is not incapable of work, that is, if he returns to work before 26 weeks are up, he can claim disablement benefit immediately.

Disablement Benefit can be increased for various reasons: (a) If you have to go into hospital for treatment of the injury approved by the Minister, you will get the benefit at the full rate of 45s. a week even if you are not 100 per cent disabled, together with Dependant's Allowances if you are entitled to them.

(b) If you are 100 per cent disabled and need someone to look after you, a Constant Attendance Allowance up to 20s. a week may be paid. In special cases this may be increased to 40s. a week.

(c) If you are permanently unfit for work an Unemployability Supplement of 20s. a week may be paid, with allowances for dependants. You can draw Unemployability Supplement and Constant Attendance Allowance at the same time.

(d) If you are permanently unfit to follow your old job, and cannot work at another job of a similar standard, a Special Hardship Allowance will be paid, as long as the Disablement Benefit and the Hardship Allowance together do not come to more than 45s. a week.

If, after you have been awarded Disablement Benefit, you are still unfit for work, whether because of accident or not, you can also draw Sickness Benefit. Unless you have worked and paid contributions for at least 13 weeks after the accident, however, the Disablement and Sickness Benefits together may not exceed 65s. a week plus any allowance for dependants.

If the accident or disease results in death, Death Benefit is payable to dependants of the dead person.

A pension of 30s. a week is payable for a widow if she is over 50 or is permanently unable to support herself, or has the care of a child of the dead man. In other cases the pension payable to a widow is 20s. a week.

An allowance of 7s. 6d. a week is payable for the first child under school-leaving age.

Certain other dependants, such as parents, are entitled to pensions, allowances or gratuities. The amounts vary with the closeness of the relationship and the extent to which they were maintained by the deceased during his lifetime.

Family Allowances:

This Scheme provides 5s. a week for every child in a family after the first, within age limits that are laid down. You can get claim forms and details from your local National Insurance Office or from any Post Office.

National Assistance:

The National Assistance Scheme is to give financial help to those not fully covered by National Insurance because of insufficient contributions or because their special needs are not fully met by their insurance.

This is a general outline to help you understand how the Scheme works, and must not be taken as an authoritative interpretation of the Law.

* The rates quoted are those of 1949, when this book was first published, and current rates may vary.

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